

# Clinical Medicine

## A Monthly Postgraduate Course

Vol. 33, No. 10

October, 1926

### Joseph Priestley

The Discoverer of Oxygen

CHEMISTRY is the handmaid of medicine, and that branch of chemistry which deals with gases is constantly becoming of greater importance as we learn more of the powers and properties of these interesting substances. It seems strange to think that, 200 years ago, little or nothing was known regarding the commonest gases occurring in nature.

By no means all of the men who have made notable contributions to medical science have been physicians, and Joseph Priestley was one of these nonmedical investigators.

Priestley was born on March 13, 1733, at the little town of Fieldhead, in Yorkshire, England. His father was a dry-goods merchant of moderate means who had left the Church of England and was therefore rated as a "nonconformist." Joseph was the eldest of six children and his family decided to make him a nonconformist minister.

His mother died when he was still a young boy and he went to live with an aunt, where he attended grammar school. That he was an unusual boy is attested by the fact that he spent his holidays in studying Hebrew.

It may or may not have been as a result of his neglect of normal boyish pursuits that his health broke down when he was 16 years old, but from that age until he

was 20 he was unable to attend school or college at all. His time was not wasted, however, for he studied the Chaldee, Syriac and Arabic languages, as well as natural philosophy, logic and metaphysics, and, when an uncle offered him a position in a branch office in Lisbon, he also learned French, German and Italian in order to fit himself for the position.

When, however, his health was restored it was not to the clerical position he went, but to a theological academy, where he spent three years in preparing himself for the ministry and was finally given a church.

From that time until 1794 he was occupying some ministerial charge most of the time, and that he took this work seriously is proved by the fact that he published a number of books on theological subjects. He also took a deep interest in politics and made himself very unpopular with the British government by espousing the cause of the American Colonies, at the time of our Revolution.

It was not, however, his theology nor his politics which made Priestley famous, but his studies and researches in the natural sciences, which he pursued, from his youth up, along with his religious and other activities.

He took up the study of electricity and by 1767 had so far mastered what was then

known about the subject that he wrote and published his "History and Present State of Electricity," and was made a fellow of the Royal Society.

About this time he began his researches into the nature of "different kinds of airs," which work resulted in his permanent fame.

In 1772 he accepted the position of librarian and literary companion to the Marquis of Lansdowne, at a salary of \$1,200 a year and a house. With him he traveled in Europe and, in 1774, worked out his epoch-making discovery of oxygen, which he described to Lavoisier and other French scientists as "dephlogisticated air." He also produced and described "marine acid air" (hydrochloric acid gas), "vitriolic acid air" (sulphur dioxide), "alkaline air" (gaseous ammonia), and a number of other gases, which he reported, along with the ingenious apparatus and methods which he had devised, in his six-volume work, "Experiments and Observations on Different Kinds of Air," which was published between 1774 and 1786.

His various political activities kept him in hot water and, in 1794, he decided that he would join his three sons in the United States. He settled at Northumberland, Pa., and lived there quietly for ten years, working on his various writings until his peaceful death on February 6, 1804.

There is considerable evidence of the fact that Priestley had no very clear idea as to the exact character and importance of his discoveries in connection with gases, but that does not lessen the value of his contributions to science. He had a keen, active and inquiring mind, well stocked with a large amount of knowledge on many subjects, and his researches cleared the way for later and more technical students to follow up and consolidate his victories over ignorance and superstition.

This year the American Chemical Society has celebrated its Golden Jubilee and opened its ceremonies by making a pilgrimage to Priestley's home in Northumberland, where, among other relics of this famous chemist, the original of the portrait we present hangs over the fireplace. Thus do the world's scientists delight to do honor to those who have kindled the torch of knowledge in the darkness of bygone years.

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The safest and most honest thing is to withhold judgment altogether. We do not always know our own souls, our own motives—how can we be sure that we know what is going on in the souls of others? —*Med. Critic and Guide.*

## ARE YOU MAKING PROGRESS?

We feel very sure that every one of you who reads these lines is making definite progress in some or all lines. If not, you are, of course, retrograding, as no one is able to stand still at any point along the road of life.

Perhaps you are not sure whether you are going ahead or not. In that case there is no better time than the present to stop and take stock. If you are not moving forward there is some reason for it and the sooner you discover the condition and correct it, the better.

Even if you are definitely progressing you may never have made any effort to find out how or why. If that is so you are very probably wasting time and effort and a careful consideration of the question would enable you to speed up very materially.

Most of us are not at all well acquainted with ourselves, and the cultivation of such an acquaintance will prove vastly profitable to us all. One of the best ways to do this is to formulate some of our ideals and methods in writing.

Next January we expect to publish another "Progress Number" of CLINICAL MEDICINE. We have some excellent leading articles on hand or on the way, but we would like to include a new feature. We want to publish a dozen or twenty—or more—letters from men who are making progress—or not—and are willing to tell their professional brethren *how and why*. If you are gaining in diagnostic ability, in clinical judgment, in the conduct of your business affairs, in general usefulness to your community or in any other way, it will be a valuable experience for you to figure out *why and write it down*. It will also be of the highest value to others to know how you do it.

If, on the other hand, you are not going forward as you think you ought, something is holding you back. What is it? The mere formulating of it may help you to break away and such an experience, too, will be very instructive to others. Then again, if you have struck a snag, some other man who has experienced the same difficulty may be able to give you helpful suggestions.

Such an "experiencing meeting" ought to be a big thing for everybody concerned and we hope that a number of you will feel the importance of this suggestion and will write us *as promptly as possible*, so that we may be getting the material into shape.

Do not hesitate because you fear the lack of literary ability. We will attend to that. Send us your *ideas* and we'll dress them up, if necessary. For your own sake, *write out the stuff*, anyway, whether you send it to us or not.

The great thing in this world is not so much where we stand as in what direction we are moving.—Dr. Oliver Wendell Holmes.

### THE NATIONAL FORMULARY

Since the passage of the Federal Food and Drug Act, in 1906, the National Formulary has been placed almost on a par with the Pharmacopoeia. The "U. S. P. X." went into force the first of the year; the new issue of the National Formulary became effective July 1, 1926.

This is the fifth edition of the Formulary, the first edition having appeared in 1888. It is the combined work of thirteen committees of the leading pharmaceutical thinkers of the country, Dr. W. L. Scoville, of Detroit, being the Chairman of the Revision Committee.

The aim of the National Formulary is to supply definite formulas for drugs and chemical preparations used in the United States but not included in the Pharmacopoeia.

This is a highly important book with which every physician and pharmacist in the country should be thoroughly familiar and should not be overlooked by anyone who aspires to be well posted along these lines.

Sad is the day for any man when he becomes absolutely satisfied with the life that he is living, the thoughts that he is thinking and the deeds that he is doing; when there ceases to be forever beating at the doors of his soul a desire to do something larger which he feels and knows he was meant and intended to do.—Phillips Brooks.

### PODOPHYLLIN

Podophyllin is a resin obtained from the dried roots of *Podophyllum peltatum*, which grows wild in almost all parts of the United States and is commonly called mandrake or May apple. Its pair of broad, showy leaves, on each side of the single, waxy-white, fragrant blossom is a familiar springtime sight to everyone.

Podophyllin consists of a resinous acid and a white, bitter, amorphous substance, *podophyllotoxin*, which is rarely used as such, good and uniform preparations of podophyllin being now widely available. It is insoluble in water, but soluble in alcohol.

**Action.** Of all *laxatives* and *purgatives* podophyllin is the slowest in action, requir-

ing twelve to fourteen hours to manifest this effect, but when once started the action may continue for two days. It is, however, very certain in its results and does not leave constipation behind it. In large doses it is a drastic purgative, sometimes causing griping, violent emetocatharsis and in occasional instances, if improperly used, gastroenteritis.

It causes an *increase* in the flow of *bile* and of the *intestinal secretions* and is said to maintain a constant moisture of the skin. In some unexplained manner it seems to exert a beneficial tonic effect in relaxed and torpid conditions of the entire gastrointestinal tract.

**Uses.** Podophyllin is the drug of choice for the treatment of all conditions, whatever the cause, which are characterized by an atonic and sluggish condition of all the *digestive organs*. The eclectics declare that it is specific in bowel disorders with full and relaxed tissues and a mucous discharge and is particularly useful where the tongue is thick, broad, pale and dirty-yellow at its base, with vertigo, complete anorexia and a dull, heavy headache.

It will *check vomiting* if the stomach and liver are torpid, but should *not* be given where this symptom is due to gastric irritation or inflammation.

In the *summer diarrheas* of children and *chronic diarrheas* of adults, where the stools are watery and have a musty, mouse-like odor, podophyllin is very efficacious; and also where the stools are dark-colored and foul. (Calomel is better for light-colored, stinking stools.)

In children a few months old who have *hard, stony stools*, podophyllin is a good remedy. Dissolve 1 grain in a dram of alcohol and give two drops of this on sugar once or twice a day. It is also useful, particularly when combined with euonymin, leptandrin, iridin or quassin or any combination of these drugs, in *intestinal flatulence* and *indigestion*.

*Atropine* or *hyoscyamine* may profitably be combined with podophyllin to prevent or lessen the *griping* and *intestinal spasm* which hinder its cathartic action.

**Dosage.** The *purgative* dose of podophyllin is 1/10 to 1/2 grain, but it should rarely or never be used for this purpose, as it is too slow and drastic and we have much better remedies of this class.

For *tonic* and *cholagogue* effects, the dose is 1/20 to 1/10 grain or even less. A dose of 1/12 grain should rarely be exceeded, as

Cushny states that large doses have a tendency to cause hemorrhages into various organs, but such a dose may be given at bedtime every other day.

In the more or less acute *diarrheal conditions*, 1/60 to 1/50 grain may be given every few hours until the desired effects are produced. Many observers prefer these very small and frequently repeated doses for the treatment of all the various conditions in which this drug gives such notable service. If tablets of such small dosage are not readily obtainable it is easy to dissolve the larger ones in a little alcohol and administer the desired dose on lump sugar, as recommended in the treatment of young children, always stopping short of the irritant or cathartic effect.

Podophyllin is too little used by most physicians, because it is easier to prescribe or dispense some ready-made mixture; but those who will carefully study the indications and combine it with suitable synergists and antagonists, so as to reinforce the beneficial and minimize the unpleasant effects, will find it a drug capable of bringing gratifying relief to a large class of difficult patients and will gain much professional prestige from its intelligent and thoughtful administration.

He that takes medicine and neglects to diet himself wastes the skill of the physician.—Chinese Proverb.

#### ARE WE A CIVILIZED PEOPLE?

The newspapers for August 26, 1926, contained notices of the obsequies of two famous men.

Dr. Charles W. Eliot, who died at the age of 92 years, was one of the greatest educators this country has ever produced. More than sixty years of his very active life were spent in efforts to raise and develop the intellectual, moral, and spiritual standards of the people of this country. For forty years he was president of Harvard University. In 1909, President Taft offered him the position of ambassador to England, which honorable post he refused because he felt that his first and highest duty was to the people of his own nation. He was the author of a number of important books on pedagogic, social, and humanitarian subjects. Probably no man of his generation, and few at any time, have done so much as he did for the promulgation of all those things which characterize what is ordinarily recognized as the advancement of civilization.

A few years ago a young Italian sprang into prominence in the United States because of the realism and abandon with which he portrayed, on the silver screen, the efflorescence of sexual passion.

The instincts and emotions which he delineated in such a torrid manner, though euphemistically labeled "romantic love," were undoubtedly those which, however necessary to the perpetuation of the race and however valuable as an essential element of connubial happiness, are instincts and emotions which we possess in common with the lower animals.

Without making any invidious comments upon his private life, it is safe to say that it was scarcely of a sort which most American fathers would recommend their sons to emulate.

His contributions to art—except that of the celluloid film—were nil; his additions to literature, human betterment, and personal or national progress were also nil. He made thousands of people "happier" by stimulating a side of their natures which is found highly developed in barbarous and even savage peoples. He died at the age of 31 years, after six or seven years of notoriety.

If we are to believe that our newspapers are a fair index of the intellectual and moral status of the people of this land, an interesting contrast emerged in those of August 26, 1926.

The *Chicago Tribune* is recognized as one of the reasonably conservative great dailies in this country, and as such may be accepted as fairly typical of the better-class papers from Maine to California. In its issue just noted the report of the last rites of President Eliot occupied exactly three and one-half inches of space—including the heading—in an inconspicuous position on page 26; while the accounts of the post-mortem and antemortem activities connected with Rudolph Valentino filled a column on page 1—in addition to an inch-and-a-half "scare head" the width of the sheet—a column and a half on page 2 and an equal amount of space on page 3, all in prominent positions. Half of the picture page on the back of the paper was devoted to the same subject. Compared to the "yellow" journals this was very conservative. In them the contrast was much more blatantly conspicuous.

Do our newspapers fairly represent the stage of development which our people have reached? If they do, we are little better than barbarians!



A few score earnest and thoughtful people mourned by the simple bier of one of the most highly civilized men our country has ever produced. Between 50,000 and 75,000 persons filed past the ornate coffin of the screen star, who typified our least civilized emotions, and the police were called upon to restrain the riotous indignation of the uncounted thousands who were denied that precious privilege.

This thing goes deeper than a passing event of the day. It reaches down into the fundamental things of our national life. While such contrasts as this can confront us, have we any right to call ourselves a civilized nation?

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Society is suffering, primarily, not from unbalanced budgets and disrupted ententes, but from wrong mental processes.—Albert E. Wiggam.

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### SPECIALIZATION AND DEATH

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A clever fellow in the East, by name Raymond Pearl, worked out some exceedingly significant ideas not long ago. He carefully observed the growth of some white rats and plotted a curve with the various ages as ordinates and weights as abscissæ, which might be called the biological curve of growth. He started a colony of fruit-flies in a glass jar, counted them from day to day, and plotted another curve. Then he did the same thing with the census statistics of several countries and cities. The thought-provoking feature of all this work was that all the curves were practically identical. Pearl feels that this proves that every group of beings, human or otherwise, is a biological entity and behaves like an individual, and the grounds for his belief seem valid.

Another thoughtful man named Shearcroft recently published a book in which he traced the upward struggle of the life-force from the primordial slime to man. In the course of this discussion he demonstrated that whenever an individual or group of individuals becomes very highly specialized it is greasing the skids which lead to Avernus. In other words, close specialization means death for an individual or a group. The great and numerous tribe of horrible reptiles which roamed over the earth thousands—perhaps millions—of years ago was highly specialized for life in a torrid climate and under semi-aquatic conditions. They are all dead long ago. Man, who never specialized his body to meet special conditions in his environment but adapted

himself to the changes—eating fruits and going naked in the tropics; and subsisting upon meat and fat and covering his body with furs in the arctic regions—has survived because he met the vicissitudes of life, not by profound changes in himself, but by adding to his personality such adjuncts as fire and houses and tools and weapons and, more lately, the telephone, the automobile, the radio and various other "modern conveniences," all of which extend the field of his activity and influence without specializing his anatomical structure.

Now, if Shearcroft is right in thinking that specialization spells extinction for a species; and if Pearl is right when he declares that any class of individuals behaves, biologically, as if it were a separate entity, it follows that close specialization in any group of human beings is preparing that group for the end of its activities.

We all know that the medical profession is highly specialized and that the process is rapidly going forward. Remember the man who remarked that every part and organ of the body now had its special devotees, except only the umbilicus; whereupon someone retorted that he had apparently overlooked the Naval surgeons!

Not only this, but, upon superficial observation, it appears as though the specialists were thriving amain, at the expense of the generalists. This, however, is merely the judgment of this present generation. Biological time is very, very long. It will require a century, or perhaps several of them, to check up on the soundness of present opinions.

In a recent address by Dr. Weller Van Hook, of Chicago (published in *CLINICAL MEDICINE* for August, 1926), he stressed an idea which has probably been in the minds of many of us, in a vague way, for some time. The rapid growth of interest in periodical inventories of our physical condition is a pointer toward the medicine of the Coming Day. The newer concept of medicine will be much wider in its scope than the world has hitherto dreamed.

Within the memory of many of us a number of the infectious diseases which formerly decimated the globe are being brought under control. Yellow fever is almost extinct; tuberculosis is now decreasing almost as rapidly as it was increasing twenty years ago; cholera, bubonic plague and smallpox are practically unknown in civilized countries; scurvy and rickets will soon cease to be. Does it require a very vivid imagina-

tion to picture the day when, barring accidents and conflagrations, there will be little or no need for physicians to minister to diseased bodies?

What then will be the future of medical science? That, of course, is on the knees of the gods; but it does not seem rash to prophesy, on the basis of present trends, what it *may* be. It seems reasonable to believe that, in time to come, men who are thoroughly trained in general physiology and hygiene will be employed to study each individual and teach him how to *keep well*. When such advice is taken few will ever be diseased in any particular organ or structure; surgery will rarely be necessary; parturition will become a strictly physiological process (even if Haldane's prophecy of ectogenesis fails to materialize), so that a host of specially trained obstetricians will be unnecessary. In a word, specialization will become, for all except a very few, the way of failure and death, and the man who has the widest general knowledge of human structure and function will be in great demand and will be generously remunerated. Specialization, which is fine for the specialists of the moment, is not in line with the orderly processes of evolution nor with the signs of the times.

So, upon careful thought, it seems that the findings of several keen and imaginative investigators, working independently and, apparently, along wholly unrelated lines, can be correlated and applied to the very things which are occupying our time and attention today.

Those who are now practicing the various specialties, especially the older men, need have no fear that the demand for their services will perceptibly diminish during their lifetimes. But how of our sons who will begin their medical studies within the next ten years? How of our grandsons who will represent our profession fifty years hence? Shall they go forward with the idea of becoming ophthalmologists, gastroenterologists, cardiologists or specialists in diseases of some other one organ or small group of organs? Or shall they be trained along broad, general lines, so as to be wise leaders and teachers of the science and practice of long and healthy living? Shall they be trained for the past or for the future?

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Search thine own heart, what paineth thee in others, in thyself may be; all dust is frail; all flesh is weak; be thou the true man thou dost seek.—Whittier.

### ORTHO-IODOXYBENZOIC ACID AND CHRONIC ARTHRITIS

Cases of chronic arthritis have, for years, tried the patience of the sufferers and of their medical attendants, who have frequently exhausted the resources of their therapeutic armamentarium without producing any improvement in the conditions treated.

Many of these patients arouse the pity of all beholders. Emaciated, deformed, suffering almost continuous pain, they are frequently helpless cripples, unable to feed or care for themselves and, in fact, scarcely classifiable as living beings, they drag out a miserable existence for years. Among these are numbered many of the cases of arthritis deformans and Still's disease (chronic, fibrinopurulent, productive polyarthritis of low virulence).

For these sufferers a ray of hope seems to be appearing, if other clinicians are able to duplicate the results reported by Young and Youmans, of Ann Arbor, Mich., in the *J. A. M. A.* for September 4, 1926.

These investigators have treated forty-three patients with intravenous injections of ortho-iodoxybenzoic acid, and have kept these patients under observation for from three months to two years. All but four were chronic cases, twenty of whom had been afflicted for more than five years. Twenty-one were severely and eleven moderately crippled. Five were cases of Still's disease.

The results of this treatment in these cases, many of which had undergone practically every hitherto-known therapeutic procedure, including physical therapy and orthopedic operations, was decidedly encouraging. Fifty-six percent of the cases were markedly improved—totally helpless patients being restored to the ranks of living and functioning humanity—and 23 percent were moderately improved. We know of no other treatment which will show an improvement rate of 79 percent in this type of cases, with total absence of beneficial results in only 7 percent of cases.

The degree of improvement seemed to depend rather upon the extent of the deformities present than upon the duration of the disease or the age or sex of the patients; and this seems quite logical, for no drug, however potent, can be expected to restore muscular and bony structures which have been destroyed by atrophy.

Neither the authors of this interesting paper nor any of those who discussed it feel inclined to limit the treatment of these cases to this or to any other one drug or procedure, feeling that every means which offers promise of benefit should be employed; but in many of the cases reported it became possible, after the administration of the o-iodoxybenzoic acid, to initiate orthopedic and physiotherapeutic treatment which had previously been entirely out of the question, because of the extensive deformities and severe pain.

One swallow does not make a summer, nor do forty-three cases, however interesting, constitute a complete demonstration of the value of a new therapeutic idea, but this drug seems to produce no notable untoward effects in any of the patients treated, so that its use may be said to be free from danger, if it is intelligently handled, and it is to be hoped that, as soon as this medicament becomes available commercially, it will be widely used by careful men who will report their results. Only in this way can we become certain whether or not we have really found help for thousands of hopeless cripples all over the country.

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Eat what you wish—after you have eaten what you should. Even Adam ate fresh fruit.

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### THE IRREGULARS IN WAR AND INDUSTRY

It is highly probable that the proportion of osteopaths, chiropractors and others of the irregulars who served our country during the war was as high as that from any other classes of our citizens, and their devotion and bravery as great—but they *did not care for the sick and wounded soldiers*, unless, perhaps, as enlisted men of the Medical Department. All the officers of the Medical Corps of the Army, Navy and Marines were *regular medical graduates*—doctors of medicine.

Look over our great manufacturing plants. Do you know of any instances where the care of the workers who are making the industrial supremacy of the United States is intrusted to *naprapaths* or *Christian scientists*? Do you know of any life insurance company which accepts *chiropractors* or any other type of *pseudo-medical practitioners* as medical examiners?

Do you know of any steamship company which employs irregulars to look after the physical welfare of the crews and passengers of its vessels? Or any reputable hos-

pital that permits them to work upon its patients? Will a certificate of health from an osteopath admit a man to the United States Civil Service?

These are questions for everyone to ponder deeply—sane and reasonable questions for physicians to ask their patients, so that they, too, may think them over.

If, as some of the irregulars claim, they are just as competent to treat the sick and advise the well as are the graduates of recognized medical colleges, why is it that all the Public Services of the country and all the great agencies which are responsible for the life, health and happiness of millions of people demand the services of Doctors of Medicine in directing their policies of human conservation and caring for those who are injured or fall ill in their service?

The irregulars cry "Intrenched privilege," but let us see what sense there is to such a claim.

The Public Services are notably conservative—not to say hide-bound—in their modes of procedure. Perhaps there is a chance that they are right in this instance. No! The war shook things up very thoroughly. The Army and the Navy bitterly needed competent persons to care for the sick and wounded. If the irregulars had ever given the authorities any reason to believe that they were able to do the work which was to be done they would have been eagerly welcomed as medical officers. It wasn't that they were not good and able *men*. Many of them made satisfactory officers, in other branches of the Service. It was simply that those in charge of the medical service, having access to all sources of information in the matter, were convinced that they were not qualified to care for the sick and wounded.

In the industrial, life insurance, and other fields their claim of special privilege is, of course, a joke. The great corporations have the money to buy the best class of services, of all kinds, that are available. What they want is *results*. They hold no brief for any sects or isms. If they could buy more results for their money by hiring an osteopath or a chiropractor nobody could stop them from hiring him.

Of course, every human being has the right to decide who shall look after his health—except where the outcome affects the health of others, as in an epidemic—and if he chooses to intrust it to a man who has been classed, by those who are in

the best position to know the truth, as one who is inadequately qualified for such work, why, as the fellow said, "It is his funeral." (This is sometimes literally true, as we all know.)

We have no desire to harm any human being and we constantly strive to do no man an injustice. We know that there are many fine fellows among the irregulars, and we have no doubt that many of them accomplish a considerable measure of good. We merely wish to call attention to the fact that none of the people who take the responsibility for the physical welfare of others are willing to accept an irregular, of any description, as a substitute for a doctor of medicine.

Do not "knock" any individual, anywhere or under any circumstances, but give publicity to these facts, coolly and without rancor or bitterness. These are things that the public is entitled to know.

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The morality of a nation, especially a republic, is not that morality expressed in its constitution, its statutes or declarations, but is the composite morality of the major portion of the population.—Homer Lee.

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#### A POSSIBLE SOLUTION OF THE NURSING PROBLEM

A good deal has been said and written, of late, about the really serious situation of people in moderate circumstances and those living in small apartments who need the services of a trained nurse.

The problem has been that a very large percentage of those who needed nursing do not require such service for more than a small part of each day, but in order to obtain this minimum of expert attention they must employ a nurse for full time, at fees which are, for many, prohibitively high, and must, in addition, house and feed her. These last two items have constituted an almost insuperable obstacle for apartment dwellers, even though they might be financially able to pay the nurse's fees.

The Central Council for Nursing Education and the First District of the Illinois State Association of Graduate Nurses have recently inaugurated a new type of nursing service for Chicago, known as hourly nursing.

By this arrangement, the nurse will come

in at any hour from 8:30 A. M. to 10:00 P. M. and do all of the things for which she is needed, such as giving enemas or hypodermic injections, changing dressings, bathing babies and preparing feedings, etc., charging only for the time she actually spends with the patient and providing her own board and room.

There are few who cannot, in a pinch, afford the \$2 or \$4 a day which such service will cost, for the relief of anxiety to the family and the increased comfort to the patient will be cheap at such a reasonable cost. Obstetrical and surgical patients can leave the hospital several days sooner than they could under ordinary conditions, and many patients who are now sent to hospitals for several days will not need to be hospitalized at all. Under such conditions the savings in hospital charges will more than pay for the hourly nursing service, in most instances.

This service has been in operation only a short time, so that it is too early to state with positiveness how it will work out. The idea seems wholly practicable and really looks like a sound and reasonable solution of a problem which has long been vexing sick people of moderate means and the physicians who are caring for them.

The very wealthy have been able to afford and to provide for one or more excellent nurses at any time they needed or wanted such attention. The very poor have been served, in the great centers of population, by the free district nursing service provided by the city or by some semi-public institution. It now looks as though the clerks, salesmen, mechanics, teachers and others with high ambitions, clear ideas of what is right and best and small salaries were going to have a chance to participate in some of the modern blessings of our alleged civilization.

It behooves other cities to keep their eyes on Chicago and to watch the outcome of this experiment very carefully. If it works as well as it *ought* to work, such a service should be widely—or universally—established. If it fails, we must gird up our loins and search further for a solution of this problem. It *must* be solved, somehow, and it will never be solved until it is solved correctly.

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# Leading Articles

## Physiotherapy in the Office of a General Practitioner

By W. B. WALLACE, M.D., Detroit, Mich.

THE time when one speaks of physiotherapy in a belittling manner has passed. Today it has its place in medicine and, while it has been receiving attention from all classes of physicians, it is probably used oftenest by the general physician or family doctor, unless it be by the orthopedic surgeon.

It is now three years since I purchased my first apparatus and commenced to really take a great interest in the subject. I had used the galvanic current for ten or fifteen years previous to this, but for some reason had gradually fallen away from its use—why, I don't know. I had also used a static machine, but not having the power to run it while in the country, it was sold, and owing to lack of space I have not replaced it, but think that I shall do so later.

Every physician, be he specialist or family doctor, owes it to his patients to give them the best service possible; relieve them of their pains and distress as soon as possible; and then correct their pathologic condition, or as nearly correct it as is possible and as quickly as possible. Perhaps the disease may not be cured, but if a symptomatic cure can be produced (and by that I mean relief of the distressing symptoms for which the patient comes to the office), then can we feel that we have done our duty.

I make the claim, and know that it cannot be refuted, that in many conditions recovery can be brought about in a much shorter time by the aid of physiotherapy than by any other means. I firmly believe that the time is coming and that it is not far distant, when the diseases in which we now know it to be of value will be far greater in number than they are today.

Keep accurate records of actual conditions and just how they were treated. A case must be studied as carefully when treated by physiotherapy as when any other method is used; in fact more so, because, to convince the skeptical physician that physiotherapy accomplishes results in cases

that have heretofore been either non-curable or at least required a very long period in which to produce a cure, we must have accurate records. The subject of this paper should perhaps have been narrowed somewhat because, in our office, we are using only the light and electrical modalities and I shall discuss only the types of work we have actually done.

### Fitting Up An Office

In fitting the office to use physiotherapy so as to get the best results, it is necessary to select apparatus made by responsible manufacturers and to buy as sturdy apparatus as possible. However, today, it is seldom that users of physiotherapy apparatus have trouble with them.

For the man in the country, far from a service station, there is probably need of his understanding more of the mechanics of his different modalities than is required by the physician in the larger cities, but I believe that any maker will be glad to go into this matter with a purchaser and make plain to him the more common sources of trouble and the correction of them.

In three years of use I have had trouble with the quartz light but once, and that was simply a loose screw; once with the sinusoidal apparatus, and that was due to a safety pin having been left on the plate so that the vibration would move it into a position in which a "short" was caused; once with the galvanic apparatus, due to a broken wire leading from the machine to the patient, and once due to some trouble with the brushes; and once with the diathermy apparatus, which was beyond me. Had I been in the country, far from aid, I could probably have traced the trouble to its source, but as it was I called the expert and you may imagine my chagrin to have him point out the simple sources of the troubles. I speak of these things because I know that when they do occur they are a source of great annoyance.



Another source of trouble is the blowing of a fuse, and you might just as well try to use your apparatus without the electricity from the main as to try to run your automobile without gas. It simply cannot be done, and yet in each case the trouble is easily remedied. If other machines are on the same line and trouble is had with one, connect the other and see if the current is coming through. If it is then try to trace out the point of trouble.

To do complete work in the most satisfactory manner it is necessary to have several modalities. Some of these are combined so that there may be two or more in one apparatus. In our office we have the galvanic, sinusoidal, high-frequency, quartz light (water cooled and air cooled), a large radiant light and a vibrator. I would not wish to do without any of them nor do I see how I could, as each has a sphere in which its use is greater than that of any of the others, but the quartz-mercury, air-cooled lamp and the high-frequency outfit are more used than are the others. If one felt that one could not have them all, I think that I would advise securing these two latter, and then the others as they might decide.

#### High Frequency Current

We know that heat and light have been used for the relief of various ills from time immemorial, and in the use of the high-frequency machine all we do is to produce heat, either to a medical or surgical degree. This heat is produced by the resistance of the tissues to the passage of the current, and the degree of the heat is determined by the amount of current and the size of the electrode. The current is sent directly through the tissues from electrode to electrode, so that the tissues become heated through and through. Were it not for the fact that the blood is constantly carrying off some of the heat, it would become painful and tissue destruction would occur.

The milliamperage is estimated at 100 m.a. per square inch of surface of the smaller electrode. However, I never depend upon the meter in giving medical diathermy, but rather upon the patient's sensations. I have found that this is the only safe method and the only one satisfactory to the patient. In my experience the patient will seldom tolerate the amounts given in the books. Allow me to suggest that it is a wise thing to make these different applications upon yourself. Thus you will have a much greater appreciation of how the

patient feels when an electrode is poorly applied or when too much current is passed or is passed too rapidly. In giving an electrical treatment the current should be gradually increased to the desired strength and not thrown in with a full switch. If you do not believe this, try it on yourself.

#### Choice of Methods

I will now take up the actual work and the reasons for selecting each particular current, considering only the types of cases that have come under my observation.

The three types of electric machines I have mentioned—high frequency, galvanic, and sinusoidal—have each a different action. The high frequency produces purely a thermal effect, the sinusoidal mechanical, and the galvanic chemical actions. With this knowledge of the effect of various currents and an understanding of the pathology, a selection of what to use is made.

#### Gonorrhea

The gonococcus is immediately killed at a temperature of 113°F. Lesser degrees of heat, if long continued, will prove devitalizing to it. It is also known that this is one of the diseases which, in the female, has been very baffling to treatment. In the chronic condition the seat of disease is so deep within the cervical tissues that medication does not reach it, but by diathermy, heat can be directed through this diseased portion, using either the Corbus or Chapman electrode.

The Corbus electrode is placed within the cervical canal and a metal belt around the body at the pelvis. The electrode with a thermometer is to be preferred. The current is gradually turned on until a temperature of 114° to 120°F. is reached, and this is continued for a period of not less than one-half hour and if possible for three-quarters to one hour. Treatments are given once or twice a week. After a few treatments a great change is found in the appearance of the cervix and of the discharge. I have not been able to produce a cure in the time that some authors claim. It has taken from fifteen to thirty treatments before the gonococci disappear entirely.

The acute condition is treated in the same manner. We have had no case of tubal infection, and uterine fundus gonorrhea is a rare condition, as is also gonorrheal vaginitis.

Acute gonorrhea in the male is not amenable to treatment by diathermy, but the chronic condition, in which the prostate has

become the seat of disease, is treated by means of the prostatic electrode in the rectum and a block-tin plate over the region of the pelvis, opposite to it. It is quite necessary to shave the pubis, otherwise there will be a sparking effect which will be painful to the patient. In fact, any treatment in which it is necessary to use an electrode over this region requires that it be shaved. The current is raised to about 750 m.a., or to a point at which discomfort begins, and is then reduced until comfortable, and continued for a period of one-half to one hour. Treatment is given every other day.

The treatment of this condition has not been so satisfactory to me as I could wish. While many cases have been cured, there are enough that have not responded to make me wonder if it is my technic or what it is that is wrong. This, like gonorrhea in the female, has required from fifteen to thirty treatments, and I have one case that has been treated for over a year and still gonococci are found.

Relief of epididymitis is one of the striking results. Patients almost universally say, after the first treatment, that they feel much better. From one to four or five treatments are given. At first we made electrodes for treating this condition, but are now using the Corbus electrode. It is much easier to apply and less liable to burn the patient.

#### Neuritis

Neuritis of the different types is another condition in which great relief is given. In this condition, as in all others, the cause should, if possible, be found and removed. Illustrative of this will report two cases, both doctors:

Dr. A. T. had neuritis in the right arm, extending from the finger tips to just below the elbow. It was of several months' standing and gradually growing worse. His tonsils were found to be the offending organs and the doctor was advised to have them enucleated. Did he have them out? No, he was like all the rest of us. The proper thing for the laity, but how doctors do dislike taking their own medicine! He was given diathermy treatment by means of a cuff electrode on the forearm, just below the elbow, and the fingers in a basin of salt solution connected with the other pole of the machine. Time of treatment, thirty to forty minutes, with 200 to 300 m.a. This treatment was followed by the sinusoidal current for a period of three minutes. After the first treatment there was less pain and after three all pain was gone, but there was still a tingling in the fingers, which gradually disappeared. He was given eight treatments, the last being in December, 1924, and has had no return of the trouble.

*Sciatica.* Dr. M. C. had touches of pain off and on for several weeks, but of late it had become so severe as to require some analgesic drug in order to secure sleep. After the first treatment he did not take anything to produce sleep, and pain was much relieved. After five treatments he had only an occasional pain. Ten treatments gave complete relief. The source of his trouble was infected teeth, which had been removed. This was in March, 1925, and he has had no recurrence. One large electrode was placed under the hip and the other on the bottom of the foot.

Sprains are much more quickly relieved by this treatment than by any other method, and of this I can speak from personal experience. On January 23, 1926, I suffered a severe sprain of the left knee, with a probable laceration of some of the ligaments of the inner side. I had a diathermy treatment that night at the office, and next day had the portable machine sent to the house, and that afternoon took three treatments, the next two days four a day, then three and two treatments a day until I commenced work. I was confined to the house for eight days. On the ninth day I was working, but did not drive the car for a couple of weeks. I took one treatment a day for about one week and have had none since. Have had no trouble with the knee. I play golf, and last week I was on a trout-fishing trip in northern Michigan—climbing hills, crawling over logs, wading streams, etc., and had absolutely no trouble in the knee.

In every case of severe sprain where there may be any question of a fracture, have an x-ray picture taken. This is my invariable rule. I have had many cases of sprain from turning the ankle, but will mention only two.

Mrs. A., colored, stepped in a hole and turned the right ankle. Said she did not sleep that night. Cried a great deal, the pain was so severe. I saw her next morning. Had the ankle x-rayed and then gave diathermy for one-half hour. In this case the treatment was given as follows: A cuff was placed around the leg above the ankle and a piece of block tin covered the bottom of the foot. Time of treatment, one-half hour, with 300 to 400 m.a. She had only three treatments, with complete relief after the first treatment. Was advised to take a few more treatments, but she said there were no more pains and it was very hard to come to the office.

A young man tripped and fell, producing the same condition as that just described. He had the same treatment, with the result that he was back at work on the fourth day.

#### Pneumonia

I have not had a case of acute lobar pneumonia in two years—not since buying a

portable machine so that I might treat it by diathermy. However, I had a case of unresolved pneumonia which was of some three or four months' standing when first coming to me. He had been unable to work for several weeks; had become emaciated; ran a daily fever; was spitting fresh blood; and there were physical findings in the chest upon which I made a diagnosis of pulmonary tuberculosis. No microscopical examination of sputum was made, but an x-ray picture was taken and the report was suspicious. Diathermy was not used, as I feared it might produce a hemorrhage. He was given ultraviolet, air-cooled lamp treatments, starting with a body treatment, front and back, of two minutes' duration every other day and increasing one and one-half minutes at each treatment. In all he had eight treatments and felt so well that he discharged himself. After about three treatments there was no more fever and no blood in the sputum and the patient began to feel very well. In three weeks went to work. While I am a great believer in ultraviolet I could not believe I had cured a tuberculous condition in so short a time, so I had the x-ray read by another roentgenologist, with a diagnosis of unresolved pneumonia. The patient has been well ever since, and this was in 1924.

Dr. Meader, director of the medical service of the Detroit Board of Health, has made some very interesting experiments concerning sunlight as a disinfectant. His experiments prove that sunlight is bactericidal; that it is most efficient between the hours of 10:30 A. M. and 1:00 P. M.; that it is bactericidal even when passed through glass but is more so when the glass is thin. Even when passed through plate glass it was still active, but required a longer exposure. Dr. Meader's experiments have also shown that indirect sunlight is still bactericidal, though the powers of the sun are greater in a dust- and smoke-free atmosphere.

#### Carbuncles

The treatment of carbuncles and all other infections has been more satisfactory, both to the patient and to me, since using the quartz lamp. The pains are less, the patient is not so ill and there is not the extensive necrosis of tissue that was seen under the old treatment. If seen early the water-cooled lamp is used, compression by the quartz rod being made; and if seen later a crucial incision is made, pus is cleaned out and the interior is painted with some one

of the dyes which carry ultraviolet rays. The quartz rod is then inserted directly into the cavity.

All cases of infection are also given the general body treatment with the air-cooled lamp. The water-cooled lamp is used one-half minute at the first treatment and time is increased at each treatment, up to three or four minutes. The air-cooled lamp time starts with two or three minutes and is increased one or two minutes at each treatment. This holds good in every treatment with the air-cooled lamp unless a severe erythema is produced, and then I wait two or three days before giving another treatment.

Two men, each past 75 years of age, were treated in above manner. The carbuncle was opened in each case. They came to the office for their treatment and one of them walked from his house to the office, several blocks. One had seventeen treatments and the other twenty-seven.

Carbuncles are very easily removed either by electro-coagulation or by using the positive pole of the galvanic current, inserting the needle directly into the tumor and passing about 10 or 15 m.a. of current. If electro-coagulation is preferred, pass the current by means of the inserted needle until blanching is produced. I use about 300 to 500 m.a. If it is a small carbuncle, one insertion is enough.

Several cases of varicose ulcers have been treated very satisfactorily with the ultraviolet, using both the water-cooled lamp, for local effect, and the air-cooled, to build up the patient. I have also used the vacuum tube in these cases, producing a sparking directly on the ulcer. One case, however, I was not able to cure. I have sometimes used the sinusoidal current to relieve the constipated condition which many of these patients have.

#### Auto-Condensation

*Headaches* are relieved in a very short time, in almost every case, by means of the Tesla indirect current, seating the patient on the auto-conduction board and then drawing the current off through your own hands, placed on the forehead, over eyes or back of the head, or wherever the pain may be.

*High blood pressure cases*, in which there is no reason why it should not be lowered, are very materially relieved by using the auto-condensation pad or couch. Be sure to have the pad well covered, else you will have a sparking effect. Another small point, if

the patient is a woman, is to ascertain if there be any metal in her dress. If this is the case she will experience slight shocks. I speak of this because it is often such small matters that make for success or failure.

Auto-condensation treatments last from fifteen to twenty minutes and the strength of the current depends upon the results obtained at previous treatments and upon how well the patient stands them. Usually the systolic pressure will drop ten to twenty points, and at next treatment it will have mounted again, but not to the point at which it was when beginning the last treatment. If after two or three treatments no beneficial effects have resulted I believe none will be produced. I usually give also ultraviolet treatments from the air-cooled lamp.

*Small warts, moles, etc.*, may be destroyed by desiccation or fulguration, either with Tesla indirect or the Oudin current. When the Tesla current is used, the patient is placed upon the auto-condensation board, one end of the wire being connected to the board and the other to the Tesla pole of the machine, and with a small, pointed metal the spark is drawn through mole or growth. If it be too large for this method of treatment, then it may be destroyed as was the carbuncle.

In many cases of *uterine bleeding*, in which a curretement was formerly done, a galvanic treatment may be given, using a positive copper or zinc uterine electrode amalgamated with mercury within the uterus, the negative being a large electrode on the abdomen. In giving either galvanic or sinusoidal treatments, always be sure that the electrodes are thoroughly wet.

Many cases of *neurasthenia* have their origin in a relaxation of the large abdominal blood vessels, which drains the blood from the brain and other organs. Together with this a sluggishness of the bowels is found. For this condition the *slow sine* is found to be of immense value, making the application of the electrodes, one at each side of the spine at the level of the point of the shoulder blades; or one may be placed over the first, second, or third lumbar vertebra and the other over the abdomen. I usually use electrodes of 2x3 inches in size, with a pad wet with saline solution, and give the current to the point at which firm contractions are produced. In giving any medical electrical current it should not be painful. In using it for surgery, enough must be used to accomplish the end sought.

### Vibration

A contraction of the uterus can be made to occur by stimulation of the first, second, and third lumbar nerves. This is to be remembered by the practitioner doing obstetrical work. It can be done with the fingers, vibrator, or the sinusoidal machine and is a very valuable aid in the treatment of a uterus which does not resume its normal condition after labor.

Last summer, just after having heard Dr. Ireland give a course in physiotherapy, I was called to see Dr. C., a very good friend of mine, who was suffering from a nephritic colic. I thought I would try out Dr. Ireland's theory and took a vibrator with me. There was no question of diagnosis, as he has had it several times, and at one time expected to be operated upon, but the stone was passed and relief came. He had all the typical symptoms. Rapid vibration was made over the tenth dorsal vertebra and in a very short time the doctor said he felt better. Continuing the vibration, the relief was complete in less than ten minutes, no drug being given. This was my first experience along this line and if I can get just this one thing across to you, I will feel repaid for my efforts.

### Mastoiditis

Mr. P. was referred for ultraviolet treatment by Dr. C., who had operated on him three times for a mastoid infection. The operation had been complete, with enucleation of the cells, but the wound could not be healed. The site of operation was filled with gentian violet dye, in a 1-percent solution, and a quartz rod from the water-cooled ultraviolet lamp was inserted in this solution. A treatment of one-half minute was given on alternate days, as was the raying of the whole body, front and back, with the air-cooled lamp. In all he received nine treatments and discontinued the treatments himself as the discharge had almost ceased and he was feeling as well as ever. However, he discontinued the treatments too soon, as there was an increased discharge after stopping, and about a month later he resumed the treatments and took about six more. Again the discharge ceased and a complete recovery was made. Several cases of otitis media have been treated in a similar manner and with very gratifying results.

### Hay Fever

Mrs. L. had *hay fever* every season for many years. Has also had tonsillitis many times; and quinsy every year. Her tonsils

were large and chronically diseased. She was advised to have them enucleated by the surgeon, but refused, as she dreaded the anesthetic. They were partially electrocoagulated, I should say to the extent of two-thirds of their original size. This was done in the early winter of 1925 and she has not had tonsillitis since. Just previous to the time at which her hay fever usually appears, intranasal treatments were given with the nasal quartz rod, using the water-cooled ultraviolet lamp. She was also given the treatments with the air-cooled lamp to the front and back of the body, as has been mentioned in other cases. She took only three of the intranasal treatments as she said the introduction of the nasal rod was very disagreeable. This may have been due to my technic.

The season of 1925 passed without an attack of hay fever and this year with only a very mild attack. A few cases have been treated during the attack with the same type of treatment except the tonsil work, but in these cases I have given the high-frequency current by means of the non-vacuum tube. In each of the cases treated the severity of attack was very materially lessened and the duration shortened.

My experience, while very limited, leads me to believe that if hay fever patients will follow up these treatments, commencing them a short time before the attack usually appears, the symptoms will be either aborted or of much less severity.

#### Asthma

A few cases of asthma have been treated, some with very satisfactory results and some not so good. One especially striking result was seen. However, the treatment extended over a long period—nearly a year. This case was that of a girl about 12 years of age. She had been troubled with tonsillitis for many years and had been advised many times to have the tonsils removed, but this had not been done until after she had diphtheria and was left with a bad heart. At the time of having diphtheria she had laryngeal paralysis and, later, partial paralysis of one arm and one leg. For this condition she was referred to an orthopedic surgeon as I was not then doing physiotherapy.

Later she came under my care again and, after putting her heart in as good a condition as possible, her tonsils were enucleated by a surgeon. Her heart condition became much better, but there was no im-

provement in the asthma. It was a pitiful condition. She would lie in bed in a doubled up position, struggling for breath, a poor, wan little girl, backward in her school work because she was never able to attend regularly.

Her parents were induced to have the ultraviolet treatments given her. At first she was given only the air-cooled lamp treatments, front and back of the whole body; later she was given parathyroid and, in addition, diathermy through the chest. The last term of school she did not miss a day. She roller-skates to school and plays with other children of her age. She very seldom has an attack and never any as severe as those she had before.

At the same time this patient was taking treatments, a younger sister had eczema of the scalp and an infection occurred from this, with the formation of a large abscess. After lancing and draining this she was given the ultraviolet treatments with the air-cooled lamp, both girls lying on the bench at the same time. In addition she was given ultraviolet radiations to the scalp, by lowering the lamp to about ten inches above the head, the hair having been cut as short as possible. The eczema was cured and her hair grew out thick and glossy.

#### Acute Rhinitis

In acute rhinitis, the same local treatment as that used in hay fever produces most gratifying results. Use both the nasal quartz rod, with the water-cooled lamp, and the nasal vacuum or nonvacuum tube of the high frequency machine. Again, I have had personal experience and have taken these treatments several times. Immediately after the treatment there is a freer breathing and this continues for several hours, when another treatment may be given. Often the insertion of the quartz rod or vacuum tube produces an intense desire to sneeze. Sometimes this can be averted, but often the rod or tube must be withdrawn and reinserted after the sneezing. In giving the high-frequency treatments the junction of the mucous membrane and skin is the part at which a sense of most uncomfortable heat is produced. The insertion of a small piece of gauze or cotton around the tube at this point will give relief.

#### Lumbago

Lumbago, a condition so often found and so very uncomfortable to the patient, is relieved with either direct diathermy or the



indirect Tesla current. If direct diathermy is the method selected, the electrode on the back should be much smaller than that over the abdomen in order to concentrate the heat in the spinal region. Often the patient will not return for further treatment as complete relief of pain is produced. If there is still pain next day, give another treatment. Seldom are more than three or four treatments required. Quite often the large radiant lamp is used in conjunction with the diathermy. Before we had a high-frequency machine this lamp was always used, with very beneficial results. In the more severe cases, a body treatment with the air-cooled quartz lamp is given. In addition to this the lamp is lowered to about ten or fifteen inches above the back and a heavy erythema dose is laid down.

I will say here what I should have said when first speaking of ultraviolet lamps: Always test the lamp on yourself. This can be done very easily by covering an arm or leg or the abdomen with a cloth or paper having holes in it and allowing the rays to act through these different openings for varying periods of time, keeping a record of the varying erythemas produced and the time required to produce them. This same procedure may be done at varying heights of the burner, and with the knowledge thus gained one may save a very uncomfortable patient, and doctor as well. This should be done when your lamps are new and also after several months of use, as it is said that less ultraviolet comes through after long use. I cannot say how many hours it is, but one of our lamps has been used nearly three years and the other about two years. They are both still very active.

#### Inoperable Malignancies

Two cases of inoperable malignant growths have been treated with diathermy and gen-

eral ultraviolet irradiations. In both of these cases the signs and symptoms were greatly ameliorated; and while the disease was not cured, comfortable life was considerably prolonged. It is my opinion that all cases of inoperable malignancy should be given the benefit of this treatment.

This line of treatment is not offered as a substitute for surgery, but give it a fair trial when the case comes to the office too late for operation or refuses operation. I do not take up the subject of surgical diathermy, except in which might be termed minor surgery, as I do not do major surgery and I believe major electrocoagulation should be done by the surgeon as much as cases of appendicitis should be operated upon by him.

In concluding I will say that if I have stimulated only one person to take up this work I will have the satisfaction of knowing that many will be relieved of their ills in a much shorter period than would otherwise be the case, and I believe many will be saved from serious operations with all their attending inconveniences—financial and otherwise.

From the results that have been obtained by the doctors who are using physiotherapy in a scientific and conscientious manner, it has received the approval of the council of the American Medical Association. Let us try to place it upon as high a plane as are the other divisions of this great society. Physiotherapy should be in the hands of the profession and not in that of the charlatans.

Do not try to do the impossible. Use every other aid—medical, hygienic, surgical—and we will be better physicians by the addition of physiotherapy to our armamentarium.

Woodward Clinic,  
13300 Woodward Avenue.

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**W**HY does a lawyer get \$10—without moving from his seat—for making out a lease that any trained stenographer can fill out in ten minutes, while a physician gets only \$1.00 to \$3.00 for diagnosing and prescribing for a patient's ills, the correction of which will keep him fit to earn thousands?

# Chronic Proctocolitis and Its Treatment

By ALCINOUS B. JAMISON, M.D., New York City

**M**AN, being an ambulant, psycho-physical organism, must necessarily carry his food supply and also the waste material of his body for a certain length of time.

Proper time for fermentation is essential in order to prepare the food for assimilation, under normal conditions. During the process of digestion and metabolism, the waste substances should pass to the lower bowel and be expelled therefrom in from six to eight hours. This insures a hygienic condition of the digestive and eliminative organs of the body.

If the intake of food occurs three times in twenty-four hours, the expulsion of the waste material should also occur three times during the same period, thus permitting the organism to remain clean and sweet after each brew of the "wine of life."

Why are human beings so destitute of gumption in regard to these matters? It comes from simple ignorance in not knowing the purpose and *value* of their mortal existence. Necessity evolved a four-footed animal into a biped, but his mental habits and the operation of his bowels have not been adjusted to his upright mode of progression. Man, still dependent upon his animalistic senses for information, retains the characteristics of his forbears—with added vices. The bane of his existence is ignorance, and the consequence is self-poisoning, sin, sickness, sorrow and premature death. Like the animal, he knows not his *whence* nor his *whither*.

What need has a biped, called man, for a large reservoir and intestines thirty or more feet in length, when one pound of food is sufficient for each of the three meals during the day?

## Unhygienic Habits

Nature is very accommodating to man—a gourmand—who suffers from scanty ejection of feces; the unduly retained sewage in the intestines forms great volumes of foul gas that balloon the digestive and eliminative organs—even the body itself. A fertile medium for the generation of bacterial toxins is found in this sewage, keeping the victim wan and lank; or, if obese, it gives him an unhealthy pallor, which be-

trays the foul systemic condition. If, from birth, *daily* hygienic conditions of the body are maintained all through life, only wholesome food would be required or craved.

Soon after the birth of man his troubles begin with the convenient application of a diaper, forming a seat or reservoir for holding frequent discharges of urine and feces. Owing to the frequently septic condition of the diaper, for what may we look as a result of the wearing of four to five thousand of these untidy garments during two years or more of their use? Naturally, for the frequent occurrence of inflammation of the integument of the buttocks and thighs. Soap, water and toilet powder give temporary relief to the skin from the oft-repeated excoriation of the buttocks. But, what about the inflammation of the anorectal mucous membrane, that has been set up from the time of the application of the first septic diaper, frequently aggravated by hundreds of other foul muslin and oil-cloth urine- and fecal-retainers, pressed against the fundament? The result is chronic proctocolitis and periprocititis.

Chronic inflammation of the circular and longitudinal muscular fibers of the lower bowel causes muscular contraction of the canal, inhibiting the passage of feces and gases and resulting in self-poisoning. Thus chronic constipation is the result.

## Chronic Constipation

Chronic constipation is a protean monster that insidiously slays more humans than all other causes combined. Coated tongue, foul breath, indigestion, etc., mean that the sewage is retained in the body, and the sewerage of the system being thus clogged to repletion, there is an overflow into the fluids and tissues of the body.

Over forty years ago I became aware of the baneful effects of chronic proctocolitis and its numerous local and systemic, primary and secondary symptoms, and I devised a very useful and comfortable apparatus for the purpose of applying antiphlogistic treatment to the inflamed tissues; this to be done by the patient at his own home. The following cut gives a very clear idea of its merits:

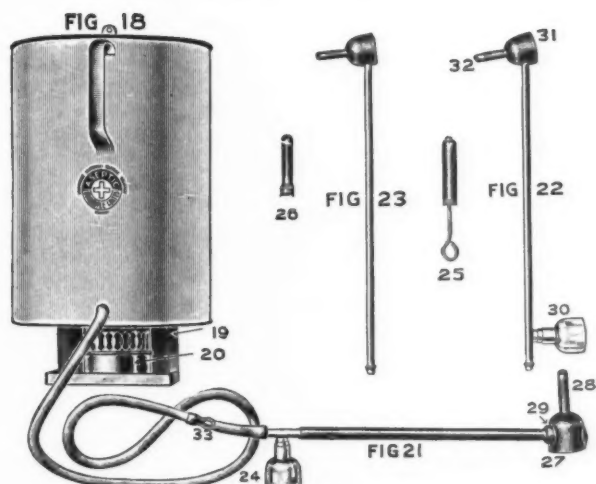


FIGURE 1

18, enamel reservoir; 21, hard rubber handle; 22, metal handle; 23, metal handle; 19, lamp support; 20, lamp; 33, rubber tube and shut-off; 24, glass bottle; 27, hard rubber anal cone; 29, valve; 28, enema point; 25, 26, recurrent douche points; 30, glass bottle; 31, hard rubber cone; 32, enema point. The enamel reservoir holds three gallons of water, to which can be attached handles (Fig. 21, 22 or 23), as may be desired. The glass bottles (24 and 30) are reservoirs for depurant oil, which is carried with the water into the large intestine as far as the water may pass.

Since we have learned that proctitis and sigmoiditis necessitate the use of the enema or some other means of relief from the chronic obstipated condition occurring above the diseased region of the bowels, the question would naturally arise as to which is the best means to relieve the obstipation in a hygienic manner, without aggravating the diseased condition of the organs in our efforts to evacuate the bowels two or three times daily, and leave them clean and receptive to the oncoming lees of the last brew, for the purpose of bodily sustenance.

There are a dozen objections to the use of the enema, which I have mentioned in a former treatise.

The device here described is a satisfactory instrument for the use of water at a temperature of 125° to 140°F., which is held in contact with the diseased tissues for five to ten minutes, then expelled, but at once applied again. This is continued for an hour or more without removing the anorectal point through which the water enters the bowel and returns. The treatment is accomplished while sitting on a toilet seat. It may be used twice or oftener in a day, or only in the evening, if the patient is employed during the day. In the water used, there may be incorporated oil

or other remedies of a depurant nature, as may be desired.

Hot water, at a temperature of 125° to 134°F. is antiphlogistic, antispasmodic, antiseptic, antacid, antifatulent and anodyne, producing a restful state of the body and a tendency to sleep. It softens cicatricial and indurated tissue, equalizes the circulation of the blood, and stimulates secretion and excretion. It is astonishing how much mucus, shreds, casts and other impurities the hot water causes to be discharged during and after the hour's treatment.

Water at a temperature of 140° to 150°F. will cause wakefulness for about two hours, if taken before going to bed, but there will be a delightful feeling following its use. I think the detergent effect on the system of hot water at the temperature named is wonderfully beneficial. It apparently releases the impurities from the system, as well as those generated in the focus of local disease, and to a great extent prevents the toxic substances from entering the circulation while the cure is progressing.

It is necessary to use local applications of 25, 50 or 100 percent phenol to regions of the mucous membrane where ulceration exists and recurs from extensive induration of the tissues.

Doctors are very much concerned about the baneful effects on the system from an ulcerated tooth or tonsil. What must be the prognosis where from 50 to 150 square inches of diseased tissue exist, the result of proctocolitis, periproctitis and ulcerated

areas in the lower bowel?

With proper management, 98 percent of sufferers from chronic proctocolitis can be cured at home, without changing the system of local treatment.

175 West 88th Street.

## Clinic Methods in Tuberculosis Control\*

By CLARENCE L. WHEATON, M.D., Chicago

Superintendent of Tuberculosis Dispensaries Medical Service, Chicago

THE education of the masses, through organized effort, is essential and a fundamental factor in the successful control of tuberculosis. The pulmonary invalid who lives without precautionary measures, so far as concerns his daily habits of life, may become a menace to both his family and friends. On the other hand, his conformity to prescribed instructions relative to his control removes practically all the elements of danger.

Society rightfully demands that the consumptive observe all sanitary rules regardless of how rigid they may be, yet the victim of tuberculosis may in return expect from the State and Municipal authorities proper instruction with reference to the arrest and control of his disease.

Any scheme of supervision to be successful will, in some measure, necessitate the education of the consumptive. Through the attending physician much valuable information may be conveyed, with a greater likelihood of securing cooperation than through any other agency. In some instances, however, the general practitioner may fail to appreciate his responsibility in this matter. In other instances he may not be sufficiently informed properly to instruct the patient.

### Instruction Needed

No amount of personal instruction should prevent the supplementary distribution of educational literature. Carefully prepared literature portraying in detail such preventive measures as may be necessary in the control of tuberculosis suffices to impart to the invalid an adequate conception of his individual responsibilities.

In a large city like Chicago, these circulars are printed in English, Polish, Italian and Spanish, the latter for distribution to

the Mexican Colony of about ten thousand people. These circulars are brief, concise and of simple phraseology, without attempt at unnecessary explanation.

Instruction may be given by duly authorized assistants working with the Health Department; by field nurses of the Municipal organization; by the women of the Visiting Nurses Association; by dispensary physicians and by the members of various charity organizations. Periodic visits by members of these groups and reports to higher authority result in administrative control that may become most effective. Other means of education of the consumptive are afforded by tuberculosis classes, free dispensaries, sanatoria, and various methods of enlightening the general public.

We recognize tuberculosis as a house disease. It is in the home that the vast majority of these people receive their instruction and supervision.

In this supervision and educational campaign the dispensary is a most important factor. In its scope it is far reaching; in its province it is directly for ambulant cases, and a center for district control; in its ultimate influence it is beyond estimation.

This influence is not confined to the rendering of routine gratuitous service to consumptives, but affords an opportunity for personal contact with the pulmonary invalid in the home, the inspection and control of his environment and the imparting of responsible instructions. It is the central point of all agencies engaged in the prevention of tuberculosis.

### Former Conditions

To R. W. Phillips, of Edinburg, our students of preventive medicine are indebted for the present conception of the unique province of the tuberculosis dispensary. Through his individual efforts there was founded, in 1887, the Victoria Dispensary

\*Address to tuberculosis workers at Mandel Hall, University of Chicago, under the auspices of the National Tuberculosis Association and Chicago Tuberculosis Institute, March 19, 1926.

for Consumption in Edinburg. In Scotland the dispensary antedated the erection of sanatoria and has remained, not merely an isolated feature of the tuberculosis movement, but has gradually developed into the most important integral part of the entire system of organized dispensary control.

There was no comprehensive tuberculosis work in Chicago prior to the year 1907. The general medical clinics affiliated with the various medical colleges and hospitals had many tuberculous patients registered at their dispensaries. The tuberculosis problem was viewed largely as a medical one. Medicine was freely supplied these patients, but practically no control was exercised over them. A knowledge of home conditions was never acquired. So far as the housing situation was concerned, we knew absolutely nothing and manifested little interest. The possibility of general infection of the exposed family and their physical incapacity was never taken into account. It is indeed surprising that a disease presenting so many complex economic and social problems and producing so much dependency should have been less understood and worse treated than almost any other disease, until the advent of the tuberculosis dispensary.

January 21, 1904, the late Dr. Theo. B. Sachs began to make a separate record for all the tuberculosis patients at the West Side Dispensary of the Jewish Aid Society. This is the first official record of special service to tuberculosis patients in this city.

The Municipal Tuberculosis Sanitarium, in cooperation with the Health Department, now supervises the control of tuberculosis in the city of Chicago, through the medium of its dispensary chain. It has control not only over those patients that come to the dispensaries of their own volition but also of the patients reported by private physicians as being tuberculous or suspected of being tuberculous.

#### Chicago Dispensaries

The territory of the city is divided into eight dispensary districts. The medical, nursing and clerical personnel of each dispensary is responsible for the supervision of all cases of tuberculosis in the dispensary in that district. The dispensaries are open from 9:00 A.M. to 4:00 P.M.; Saturdays 9:00 to 12:00; and Tuesday and Friday evenings 6:30 to 8:30 P.M. Since July, 1917, the dispensaries have been operated on a full-time basis. The medical staff consists of ten full-time and twelve part-time

physicians, who have been appointed through Civil Service examination. They are graduates of our best colleges, are highly trained, and in most instances have had years of experience. Many of our present staff are ex-internes of Cook County Hospital, and their general caliber is of the highest.

The service rendered at the dispensaries is calculated not only to care for the patients who come to the dispensaries, but to enable each physician to canvass his district, remain in the field a part of his time and by getting in touch with actual living conditions of his patients to give such advice as may be necessary in their home care. The total service rendered in these dispensaries and in the field by each full-time member of the staff is 38 hours per week.

Among those coming to our dispensaries were many tuberculous patients in urgent need of dental care whose cases might become arrested with proper attention to this factor. Only one experienced in children's dental dispensary work and who is actuated by a keen desire to improve general health conditions can perform this service satisfactorily.

The prevention of tuberculosis is the most important health problem confronting the municipality or state. The reduction of the morbidity and mortality from this disease lies in prevention rather than cure.

Laws applicable to the control of tuberculosis should be directed against the open case who has in the past freely mingled with the public, spreading his infection everywhere. These laws should be rigidly enforced, and all persons should be required to report cases of tuberculosis or suspect cases. Quarantine supervision is then exercised over these cases.

#### Tuberculosis Among Children

Among the anemic and undernourished children of our public schools, those who have been ill or are still in contact with cases of tuberculosis are often found. Among the children of this group, not infrequently, sufficient physical signs are evident to make a definite diagnosis of tuberculosis infection. It is in this group that it is possible to make early diagnoses and to institute preventive treatment. In the care of these early cases of tuberculosis in children much can be accomplished in preventing the development of the adult type of the disease.

In the schools of Chicago during the year, September, 1922, to June, 1923, 165,-



308 pupils were given physical examinations. Of these 120,583 were found to have physical defects. Of this number 437 were tuberculous cases or suspects and were referred to the Municipal Tuberculosis Sanitarium for further examination and supervision.

During the school year, September, 1923, to June, 1924, 156,338 children were examined, 123,635 had physical defects, and 427 were referred to dispensaries.

In the city of Chicago there are over 31,000 diagnosed cases of tuberculosis. Of this group over 2000 are open cases. There are approximately 1900 free beds for the treatment of tuberculosis patients in public institutions in and adjacent to Chicago. In the past much favor seems to have been shown the early incipient case. He was sent to the sanitarium with the hope that a cure might be affected. The problem of curing tuberculosis is, however, of little consequence as compared to its prevention in great cities.

The object is to control tuberculosis by limiting its spread and by removing contacts, especially children, by hospitalization.

To the student of this problem I believe it is apparent that the dispensary is fundamentally essential to the control of tuberculosis, to the solution of the economic and social problems incident to the disease as well as to the medical treatment, and hospitalization of those people acquiring the disease.

#### Operation of Dispensaries

The general plan of the nursing work in both the clinic and the field is under the direction of the head nurse of the dispensary. The next in rank is her assistant, who in the absence of the head nurse is in charge. The territory of each dispensary is subdivided into smaller districts with a field nurse assigned to each. These, with a general clinic nurse and one in charge of the dental work, complete the regular dispensary nursing organization. Conferences for all nurses are held at weekly intervals, at which time items of interest and questions of importance are discussed. Each field nurse spends one day a week in clinic. All patients in her district are advised of this fact and if they wish to attend clinic on that day they are received by a nurse who is familiar with their cases. This plan works well, especially in the handling of children.

Aside from these field nurses the Municipal Tuberculosis Sanitarium also maintains a staff of fifty nurses who are assigned to

regular school work during the school year and who return to the dispensary department at the close of the school year to replace the regular field nurses during the vacation period or may be assigned to pre-ventorium work at the sanitarium or to summer camps for children.

Immediately following the examination by the physician all cases registered in the dispensary department of the Municipal Tuberculosis Sanitarium are referred to the nursing service for routine follow-up calls. All pulmonary cases are visited once each month, and more often if necessary.

The first visit is made within twenty-four hours of receipt of the report of the case. Glandular cases are visited once in three months, and more often if necessary. The field nurse also calls on cases under the care of private physicians once in three months to make sure that all regulations governing the control of pulmonary tuberculosis are being observed and to collect sputa for analysis. The assignment of these cases is made by the head nurse, who receives them from the head physician on a form which contains the name, address, age, diagnosis and physician's orders.

The nurse's duty is to visit the patient, and if necessary further explain the doctor's orders and assist in making plans for carrying them out. While the immediate needs of the sick person are her first duty, she is at the same time on the alert for any suspected cases among the other members of the family, and to this end has all who have been in contact with the patient examined. She also attends to any medical or surgical treatment that may be needed—in fact, she is there in the capacity of a friend as well as a nurse to render whatever service may be necessary to improve general as well as specific conditions. All patients are instructed in regard to ventilation, proper diet, personal hygiene and the control of habits which may in any way affect their general health.

The social problems of the family are studied and helpful suggestions made. In many cases a complete change of living conditions is necessary before anything is considered along the line of health building.

#### Bedside Care and Open Cases

Bedside care is worthy of much more consideration than it generally receives. The bedridden case is truly a problem at times. With crowded institutions it is almost impossible to remove him from the home. In homes, therefore, where there are no chil-

dren and where the environment can be made safe and comfortable for the patient, bedside care is given by the nursing staff wherever possible. These patients are visited as often as possible, terminal cases are called on daily, others every second day.

Dressing cases where drainage is profuse are dressed daily, or as often as the physician orders.

Any person found to have positive sputum immediately falls into the special class known as open cases and must be given particular attention. All open cases of pulmonary tuberculosis in contact with children under 16 years of age are not permitted to live in the same home, apartment or other place of abode or habitation. In about 95 percent of these open cases the separations are brought about willingly and almost immediately after the law is explained and the danger to the child made plain. In the remaining 5 percent more drastic action is at times necessary and the case is forcibly hospitalized.

There are always to be found a few vicious flagrant violators of public health rules who are a menace to the community. Happily, these offenders are in the minority.

#### Open-Air Schools

The open-air school is a form of preventive work maintained by the Municipal Tuberculosis Sanitarium in cooperation with the Board of Education. At the present time there are in Chicago fifty-two open window rooms in twenty-six schools, caring for 1560 children, with a registration of approximately 1800 children. The Municipal Tuberculosis Sanitarium dispensary service provides medical and nursing care to this branch of the work. Twelve nurses are assigned to the open window rooms. The children recommended for open window room care are selected from the regular class rooms of the school or may be transferred from neighboring schools through surveys made at the beginning of the school year, and again in January by the dispensary physician.

Many are children of tuberculous families under dispensary supervision; some show glandular involvement, while others are children who have been in contact with cases of tuberculosis and while they may not show any definite infection they are classed as suspects, are anemic or underweight and would not be able to carry on the routine of every-day work at school were it not for the benefits they receive

from open window room regimen. Active cases of pulmonary tuberculosis or subnormal children are not admitted to these rooms.

While the problem of the school child is a large one, no other is of greater importance. Upon the physical health and mental progress of our children depends the whole structure of our national life. We recognize the fact that any attention given the problems of child welfare must concern the child in the pre-school age, commencing with the mother and baby and leading through the kindergarten to the primary school. Such problems as the care, feeding and nutrition of the child, his condition of health or disease, abnormalities, physical and mental hygiene and training in hygienic habits are of tremendous importance to all individuals and organizations charged with the administration of public education. Indeed, from the standpoint of public welfare, they are of vast importance, not alone to the educator but to the statesman as well. The school is outstanding as a child welfare agency. The elementary school, particularly, is responsible that right mental and physical foundations are laid. The schools of today have a much larger field than the teaching of reading, writing and arithmetic, and they have quite properly shouldered the responsibility by providing for the defective and handicapped pupil.

The number of children coming under our observation handicapped by malnutrition, cardiac defects, or chronic diseases who are in special need of hygienic arrangements in the school might be conservatively estimated as over 1 percent. The undernourished children in an ordinary school population have been placed as high as 20 percent, and the percentage of potentially tuberculous children is quite as high. Medical inspection in the school, nutrition classes, instruction in physical education, school lunches and home visitation are all factors employed in reaching this large group of children in conjunction with the work of the open-air rooms.

Thus the undernourished child is brought into close relationship with the physician, the nurse and the teacher, who become thoroughly familiar with his environment and with him personally, and who are thus able to help him overcome the mental and physical conditions which hinder his progress. Without this care, too often, the physician, social worker, Juvenile Court and other agencies might find these children in

institutions for dependents and delinquents, in welfare departments of stores and factories, in homes where the domestic relations are such that the family has begun

to disintegrate, and last but not least in importance, in our tuberculosis clinics which form an important part of the social machinery of this great city.

## Gastric Hyperacidity and The New Colloidal Treatment

By SOLOMON R. KAGAN, M. D., Springfield, Mass.

Formerly Chief of the Zemstvo Hospital in Crimea

**I**N view of the widespread interest created in medical circles by my last paper, "The Treatment of Gastric Ulcer and Hyperchlorhydria," which appeared in the April (1925) issue of CLINICAL MEDICINE, and particularly by that part of it which dealt with the new colloidal method of treating gastric hyperacidity, I have been prompted to communicate a further paper dealing specifically with this colloidal method and the product used in its application, to-wit: colloidal hydroxide of aluminum.

I have been interested in this colloidal product, first, because it is my belief that from colloidal chemistry, a comparatively new branch of the science, the medicine of the future will have much of advantage to draw; and, second, because I was attracted by the theory of the product which in turn led me to a practical investigation of its value in the treatment of conditions in which gastric hyperacidity is a prominent feature of the syndrome.

Since my last paper in the issue of CLINICAL MEDICINE, above referred to, I have had the opportunity not only to make further personal investigations of the product, but to receive from other physicians their opinions and reports concerning its value in the

conditions stated. Further, I have carefully studied important articles and papers upon the subject which have of late appeared in domestic and foreign medical journals. It is the purpose of this article to collate and set forth this further knowledge and experience of the product so gained in the interim.

### Colloidal Hydroxide of Aluminum, Its Physico-Chemical Properties

Before proceeding to the discussion of the therapeutic aspects of the product, a brief survey of its chemical and physical properties, particularly as they apply to its therapeutic uses, will be advisable. From the chemical or physico-chemical viewpoint, colloidal hydroxide of aluminum (known as Alucol) is a most interesting product. It is a tasteless, odorless, creamy-white, amorphous powder, insoluble in water and alcohol

and permanent in air. It is what is known in colloidal chemistry as a "disperse" aluminum hydroxide of the same chemical formula— $Al(OH)_3$ —as the aluminum hydroxide of the pharmacopoeia, but having different physical properties. To the present inquiry the property of greatest importance is that by which, under the action of a suitable electrolyte, the product changes into what is known as a "col-



Dr. Solomon R. Kagan

loidal system" or "gel." To illustrate this property, if hydrochloric acid, an electrolyte, is added to this particular form of aluminum hydroxide a colloidal system is formed, or, in other words, colloidization takes place, the aluminum hydroxide swelling to form a gelatinous mass or a more or less viscous colloidal solution, depending upon the degree of concentration of the acid. This phenomenon can be well demonstrated by shaking up about 1 Gram of the colloidal hydroxide of aluminum powder with about 5 cc. of water in a test tube and adding to the mixture about 1 cc. of dilute hydrochloric acid, again shaking vigorously. Almost immediately the contents of the tube become converted into a thick translucent jelly, or "gel," as it is known in the vernacular of the colloidal chemist.

The "gel" is an adsorption compound of hydrochloric acid, and its consistence depends largely upon the hydrogen ion concentration or degree of acidity of the surrounding medium. No such colloidization takes place if the ordinary hydroxide of aluminum of the pharmacopoeia is substituted for the colloidal product.

Another important point directly bearing on the present inquiry is that, no matter how much of the "solid phase," or of the original colloidal hydroxide of aluminum itself is present, it cannot completely remove all the acid in the medium except after a long period of time.

#### Laboratory Findings

The last-mentioned fact has been proven by laboratory experiments in which the electric conductivity of the medium was measured at regular intervals. When much of the solid phase was still present in the medium the conductivity of the fluid, although much lower, was still easily measurable after many hours. Such could not have been the case had all the acid been removed. The significance of this in the applied therapy of the product, the theme of the present communication, is that while colloidal hydroxide of aluminum removes from a hyperacid stomach only the harmful and offending excess of acid, it allows a sufficiency of acid to remain to permit the unimpeded progress of normal gastric digestion.

Another important fact proven experimentally by myself and other workers—a fact which bears directly upon the applied therapy of the product, particularly upon its posology—is that the decrease of acid due to adsorption does not depend upon the

amount of colloidal hydroxide present, but mainly upon the hydrogen ion concentration of the surrounding medium and its temperature. To illustrate this point, it can be shown experimentally that the decrease in acidity caused, in turn, by 0.05, 0.1, 0.5, and 1 Gm. of colloidal hydroxide of aluminum, acting upon 10 cc. of a 0.2-percent solution of hydrochloric acid for ten minutes at body temperature, is approximately the same in each instance. This laboratory finding not only indicates the colloidal character of the product, but also accounts for the fact that a large dose of it does not, as a rule, or of necessity, produce any better or more pronounced therapeutic effect than when a moderate quantity is taken. If too large a dose is given, that part of it which escapes colloidization by the gastric acid merely passes through the alimentary tract and is evacuated. Neither the solid phase nor its "gel" is absorbed in the intestine, which fully accounts for the fact that, no matter in what dose it is given or over what length of time, colloidal hydroxide of aluminum is nontoxic and has no systemic action whatever.

This drug not only has the property of adsorbing hydrochloric and other mineral acids, but the organic acids as well. In my experiments with acetic and lactic acids, concentrations of their solutions from 0.240 to 0.318 percent were reduced under the action of colloidal aluminum, ranging in limits from 0.058 to 0.108 percent. In a recent paper published by Professor H. Surmont and J. Cauvin,<sup>1</sup> of Lille, France, this point is well illustrated by the partial but not complete neutralization of solutions of lactic, butyric, and acetic acids.

Having thus briefly reviewed the action of colloidal hydroxide of aluminum from the chemical or colloido-chemical viewpoint, or as it may be observed *in vitro*, it will here be apposite to extend our inquiry to the behavior of the product *in vivo* under a condition of gastric hyperacidity.

As might be expected from its colloido-chemical properties, upon entering the hyperacid stomach colloidal hydroxide of aluminum forms a "gel." In doing so it removes a great deal of the acid, but, as has been noted above, cannot remove it completely. At any rate the excess of acid is removed, locked up as it were, in colloido-chemical form in the gel and taken out of the system in that form via the alimentary tract. Experiments upon animals (dogs) have shown that when given upon a comparatively empty stomach this drug causes the mucous membrane to

become covered with a thin layer of gelatinous mucilage.<sup>2</sup> This layer might be expected to exercise a protective influence over the gastric mucosa, allay irritation by adsorbing acid and other irritants, exert a mildly astringent action and have a distinct healing and sedative effect. As will be noted below, this prognosis seems to be supported by actual clinical evidence.

#### Clinical Evidence

Since its first introduction, several years ago, in the clinics of western Europe, the colloidal hydrate has been very favorably received and reported on by prominent medical men.

In a paper read by Professor Roch, of Geneva,<sup>3</sup> before the sixteenth session of the French Congress of Medicine, held in Paris in 1922, he said, "Colloidal hydroxide of aluminum adsorbs hydrochloric acid; it has proven in our hands the antacid medication par excellence, far superior to bicarbonate of soda, magnesia, subnitrate of bismuth, etc."

Dr. Rene Guillermin, in another paper,<sup>4</sup> stated that he considered the colloidal hydroxide of aluminum a specific in the treatment of gastric hyperacidity, whereas treatment by alkalis was purely symptomatic and one which afforded neither to the patient nor to the doctor any permanent satisfaction. He obtained far better results from the colloidal treatment, particularly in chronic and long-standing cases.

Comparing the colloidal and alkaline treatments it is the opinion of the author of this paper that, while the latter is useful and satisfactory in conditions of hyperchlorhydria of the milder type, the former is especially valuable in those which are more pronounced and particularly in chronic cases of long standing—cases in which the alkaline antacids no longer act or cannot be employed owing to their harmful secondary effects. There can, in fact, be no doubt whatever as to the efficacy of colloidal hydroxide of aluminum as an antacid gastric sedative in chronic affections of the stomach. Its value in this connection has been abundantly proven not only by the author but by numerous clinicians, both in this country and in Europe. The following case history published by Guillermin illustrates the value of the product in the chronic case:

Case 4, M. X., architect, age 71; family arthritic. First stomach trouble (cramps) during military service. When 25 years old had several painful stomach attacks with nausea. From 28 to 35 years these attacks

became very frequent and troublesome. He was treated by dieting, bicarbonate of soda and magnesia. After several bad weeks he would experience periods of good health, which never exceeded a few months. At 55 years of age the attacks became still more painful. The gastric reaction showed at this time .28 percent free acid. He took a psychotherapeutic treatment at Berne which led, however, to no improvement of his condition. At 64 years of age radiographs indicated ulceration of the stomach with decided dilatation and a slight stenosis of the pylorus. He then dieted strictly, taking two complete rest cures and was incapacitated from work for six months. The gastric reaction at that time showed 0.4 percent acid; vomiting was frequent. There was no hematemesis, but traces of blood were found in the feces.

When the patient came under our care for treatment, in 1918, he was 67 years old. The attacks at that time were frequent and very painful, but there was little vomiting. For several days spasmodic attacks persisted. There was considerable meteorism, the tongue was firm; the urine alkaline. Belladonna was useless as a sedative. In May, 1922, during a particularly painful attack, we tried hydrate of aluminum and obtained a rapid and unexpected improvement. From this time on the patient regained activity and enjoyed a degree of comfort which was quite new to him. He took regularly two teaspoonfuls of the medication every day and had no further attacks. Some symptoms remained, necessitating increase of dose for several days. The feeling of painful hunger and "heartburn" have completely disappeared. This patient, who is very thin, has regained in several months 10 kg. (about 22 pounds) and, in fact, has returned to his normal weight. This result is all the more significant in view of the fact that M. X. has had much family trouble for the last few months. Until then the mental troubles always had undoubtedly an adverse effect upon the digestion.

In the writer's experience the cases which have shown the most striking response to the colloidal treatment have probably been those of gastric or duodenal ulcer associated with, or which have arisen from, hyperacidity. I particularly recall one case of duodenal ulcer which came under my care in the fall of 1925. The diagnosis was confirmed by x-ray examination. This was a case of long standing which had been on a special diet and under alkaline medication for over three years without any appreciable result. I retained the diet, but changed the medication to colloidal hydroxide of aluminum, in 15-grain doses, half an hour before and half an hour after each meal. Distinct relief was obtained. The symptoms subsided; the patient regained his normal activity and now enjoys a degree of comfort unknown to him for some time.



In another case of hyperacidity associated with constipation I administered the colloidal product, with excellent success, in conjunction with a lacto-vegetarian diet. In a case of hyperacidity associated with flatulence and diarrhea, the administration of the colloidal hydroxide, in conjunction with lime water, brought relief.

A New York physician, Dr. Valdemar Sillo, reported that he had had a very satisfactory experience with colloidal hydroxide of aluminum, covering a period of about six months. He cited one case of duodenal ulcer with extreme hyperacidity. The only relief the patient had been able to obtain had been from large and ever-increasing doses of bicarbonate of soda, taken at frequent intervals. Colloidal hydroxide of aluminum was brought to his attention. He commenced using it in rather larger doses than those usually recommended (15 grs. t.i.d.), and in three or four days a distinct improvement in the patient was noted and a decided abatement of the symptoms. The colloidal treatment was continued and in a short time the patient was entirely free from pain and able to resume his regular diet, even to the extent of eating grapefruit, which he had not dared to do before.

Another interesting case reported by Dr. Sillo was one of gastric ulcer which had been treated for some time with bismuth and alkalis. The patient, a woman, responded quickly to the colloidal treatment and in two days after commencing it reported that the "new medicine" the doctor had given her was "wonderful." She further stated that she had learned what it was to sleep the whole night through, which she had been unable to do for some time. Dr. Sillo further reported using the colloidal treatment successfully in a number of other conditions, including several cases of mucous colitis and diarrhea. His experience of the treatment confirms the findings of other clinicians, particularly as regards its value in the chronic ulcer case.

A series of clinical tests carried out on a number of hyperacidity cases published recently by Surmont & Cauvin<sup>5</sup> is interesting as showing the actual decrease in total and free gastric acidity effected by the colloidal treatment. Results in six of the cases treated are given below:

Diagnosis	A	A'	H	H'
I Duodenal Ulcer.....	0.233	0.194	0.176	0.145
II Hyperchlorhydria of Colic origin.....	0.292	0.146	0.171	0.098
III Pyloric Stenosis and Chronic Ulcer.....	0.182	0.080	0	0
IV Hyperchlorhydria of Nervous Origin.....	0.335	0.164	0.214	0.169

V Hyperchlorhydria. Vertigo of Ocular Origin.....	0.299	0.135	0.200	0.094
VI Gastritis, Drug Origin, and Hyperchlorhydria.....	0.357	0.266	0.246	0.171

A = Total acidity.

A' = Total acidity after colloidal treatment

H = Free acid

H' = Free acid after colloidal treatment

It is of importance to note with regard to the above recorded cases that the reduction in total and free HCl was accompanied by disappearance of other symptoms of hyperacidity such as pain, spasm and secondary nervous manifestations.

Dr. A. F. Stotts, of Galesburg, Ill., reported to me his experience of the product in cases of gastric and duodenal ulcer and hyperchlorhydria. The ulcer cases were confirmed radiographically. One gastric ulcer case was particularly interesting. All symptoms were relieved within the first seven days the patient was in the hospital. At the time of his writing, Dr. Stotts stated that the patient had been back at work for about thirty days and was apparently perfectly well the last time he saw him. In another case (duodenal ulcer), reported by Dr. Stotts, the patient was apparently relieved within eight or ten days after commencement of the treatment. The symptoms, however, returned in about six weeks after their disappearance and within ten days after the colloidal treatment had been discontinued.

With regard to permanence of results, Dr. Stotts stated that he had not as yet had sufficient experience with the product to enable him to form any definite opinion. In three cases of hyperchlorhydria treated by him, Dr. Stotts reported the results were prompt, all symptoms apparently disappearing within the first week of treatment. At the time of reporting, he stated that two of these patients had recently discontinued using the product and were free from all symptoms; the third was still using it, but reported that he was feeling fine. Dr. Stotts further reported that he believed he obtained better results from colloidal hydroxide of aluminum when used in conjunction with a colon vaccine. Further reference to this is made below under the heading, Adjuvant Treatment.

An interesting case of chronic hyperacidity was reported by Dr. Joseph A. Robinson, of Darlington, S. C. The patient in question was given the colloidal treatment for several weeks. Splendid results followed and the symptoms of long standing disappeared. The doctor reported other cases associated with hyperacidity given the same treatment with most satisfactory results.

Dr. A. S. Tuchler, of San Francisco, wrote me, "I had excellent results from colloidal hydroxide of aluminum. I was much pleased with it, preferring it to the sodas for gastric hyperacidity."

#### Colloidal Hydroxide of Aluminum vs. Alkaline Medication

In another part of this paper I have al-

ready stated my opinion of the alkaline treatment as compared with the colloidal. However, it is perhaps of academic interest to review here the seven main objections usually made to intensive alkaline medication and to indicate in an adjacent column how and why the colloidal treatment is likely to overcome each of them:

#### Alkaline Treatment

(1) Alkalis render pepsin inert as a digestant of protein and so allow much of the protein element to pass through into the intestines incompletely hydrolyzed into the amino-acid end products required for absorption. The consequence of this is a lowered capacity for the utilization of the protein elements of food and a resulting innutrition if the condition is allowed to continue for any length of time.<sup>4</sup>

(2) Alkalis tend to destroy the important vitamine, water-soluble B, which is extremely sensitive to their action. Intensive alkaline medication, if long continued, is therefore likely to lead to grave nutritional defects.<sup>5</sup>

(3) Recent investigations<sup>6</sup> have shown that toxic symptoms often arise as the result of intensive alkaline medication. Headache, pronounced distaste for milk, nausea and vomiting were prominent among such symptoms, while laboratory tests showed an increase of blood-urea and creatinin, and of the carbon dioxide combining power of the plasma; albumin, casts or red blood cells were found in the urine in many cases.

(4) The alkalis, by merely neutralizing hydrochloric acid, fail to prevent systemic reabsorption of the acid radicle and hence ultimately stimulate instead of subdue formation and secretion of hydrochloric acid.<sup>9</sup>

(5) Alkalis destroy the antiputrefactive power of the hydrochloric acid and so favor fermentation and formation of lactic, butyric, and other irritant organic acids.

(6) The use of alkalis by favoring an increase in the secretion of HCl necessitates increased dosage so long as the alkaline medication continues. This is a fact well known to lay users of bicarbonate of soda and other alkaline antacids.

(7) The prolonged use of alkalis favors the formation of renal calculi.<sup>10</sup>

#### Colloidal Treatment

(1) Colloidal hydroxide of aluminum does not render pepsin inert as a digestant of protein. It adsorbs excess of acid, colloido-chemically, but at the same time leaves a sufficiency for normal gastric digestion. Thus proteolysis can proceed unhindered.

(2) Colloidal hydroxide of aluminum causes the destruction of no food element or factor; hence, it affects in no way the normal processes of nutrition.

(3) The administration of colloidal hydroxide of aluminum, even over long periods of time, gives rise to no toxic symptoms.

(In this connection it is interesting to note that in recent investigations of certain toxic symptoms following the alkaline treatment it was found that the symptoms disappeared in from twenty-four to forty-eight hours when alkalis were withdrawn and the patients were treated with a liberal diet of such vitamine-bearing foodstuffs as milk, cereals, eggs, and fruit juices.)

(4) In due course of digestion the acid-containing "gel" passes through into the intestines and is finally evacuated from the lower bowel; hence colloidal hydroxide of aluminum removes from the system the causative acid radicle instead of merely temporarily neutralizing it, and so permitting reabsorption, accumulation and consequent recurrence and aggravation of the symptoms of the disease.

(5) Colloidal hydroxide of aluminum in no way interferes with the normal antiputrefactive function of the gastric juice.

(6) No increase of dosage is required in the cases of colloidal hydroxide of aluminum because it removes the causative acid radicle entirely from the system.

(7) It is obvious that colloidal hydroxide of aluminum could have no tendency to produce renal calculi.

### Adjuvant Treatment

It is not to be expected that this, nor any medicinal or remedial agent, will produce a positive result in all cases. Neither can a positive result be looked for at all times from the simple administration of a single product unaided by some other product, treatment or special regime. Disease itself is usually a complex which requires for its successful treatment full consideration not merely of one of its component parts but of all of them. Therefore, before such a treatment can be prescribed, as true a picture as possible of the syndrome, with its shadows and high lights, must first be obtained by careful diagnosis, and what, of course, is even more important, as accurate an estimation as possible of the etiological factors which enter into the case.

Hyperchlorhydria, indeed, is but a single symptom of a pathologic complex with a fairly wide range of possible etiologic factors which cannot be discussed within the limits of the present article. Such factors, however, as mental states, neurasthenic conditions, diet indiscretions, myasthenic or atonic states of the stomach and constipation should be carefully noted and controlled, so far as possible, by appropriate adjuvant treatment.

It is an acknowledged fact that diet plays the leading and most important part in the treatment of hyperchlorhydria. Medicinal and other treatments may, in fact, be considered adjuvant or of secondary importance to that of diet. To ignore the question would obviously be to court failure and nullification of any positive result which the best and most appropriate medicinal treatment could produce.

In the course of my experience in the treatment of gastric hyperacidity I have found that constipation is frequently present concomitantly either as a symptom or as the primary cause. However, in either case, when prescribing the colloidal treatment where there is constipation, I have adopted the simple expedient of combining it with some laxative such as *Pulv. Rhei*. The colloidal medicament can also be prescribed to advantage, in some cases, combined with belladonna or atropine. These drugs are particularly useful, given in fairly large doses, where there is gastrospasm or pylorospasm. When gastric hyperesthesia is pronounced, the common nerve sedatives such as bromides, valerian, or sambul can be well prescribed in conjunction with the colloidal treatment.

I have referred above to the work of Dr.

Stotts of Galesburg and to his use of the colloidal treatment in conjunction with a colon vaccine. His theoretical justification for the use of this vaccine is that ulcers are probably infected and that the colon bacillus is the infective agent. Clinical experience over a period of nearly fifteen years seemed to him to justify the conclusion. The vaccine is given at intervals of not more than three days, commencing with a dose of 1/10 cc., and increasing every second dose by 1/10 cc.\*

### Dosage and Method of Use

Colloidal hydroxide of aluminum is administered either in tablet or powder form. In my own experience, which is confirmed by that of others, the tablets, if properly made, are useful in hyperchlorhydria of moderate intensity or where there is little pain. Where the symptoms are more pronounced or where much pain is felt, I have found the powder preferable. When tablets are prescribed, the patient should always be cautioned to masticate them carefully before swallowing to insure effective action of the product when it comes in contact with the gastric secretion. Another necessary caution, whether powder or tablets are used, is to instruct the patient to avoid, so far as possible, ingestion of liquids during the periods in which the doses are taken. Obviously, to dilute the stomach contents at the time of administration would tend to hinder formation of the colloidal gel and adsorption of acid. The powder is usually given in wafers or cachets or it may be prescribed taken mixed in a small quantity of water or milk.

Owing to its colloidal character it has been shown above, under the heading of Laboratory Findings, that a large dose of the colloidal hydroxide is not likely to produce any better or more pronounced therapeutic effect than when a moderate quantity is taken. This is a fact which is thoroughly confirmed by clinical evidence. In the writer's experience any dose from 0.5 Gm. to 2 Gm. is equally well tolerated and effective if given at the right time and to the right patient (i.e., when diagnosis indubitably points to hyperchlorhydria). The importance of dieto-therapy as adjuvant treatment should here again be emphasized.

A good average dose of the colloidal hydroxide of aluminum is 1 Gm., or 15

\*In this connection it is noteworthy that acute ulcers of the stomach have been artificially produced in dogs and rabbits by local anaphylaxis to foreign proteins. See "Production of Gastric Ulcer by Local Allergy," Ivy, A. C., and Shapiro, F. F.; *J. A. M. A.*, V. 85, No. 15 (October 10, 1925), p. 1131.

grains. I have rarely given less than this amount, but in some of my cases I have administered as much as 30 grains of the powder at each dose. Surmont and Cauvin<sup>11</sup> give as large a dose as a teaspoonful or half a teaspoonful, one and a half or two hours after the meal, according to the time of the appearance of the pain. They then continue the use of the product by giving half or a third of the original dose at intervals of longer or shorter duration, according to the nature of the case.

Time and frequency of dosage are, of course, important. However, there appears to be some divergence of opinion in the matter, which is not altogether surprising considering the varied character of hyperchlorhydric cases as regards the time and frequency of appearance of the hypersecretion and other concomitant symptoms. If a general rule is possible under such circumstances a dose of 15 grains half an hour before and 15 grains half an hour after each meal may be suitable for the average patient, but as "circumstances alter cases," adaptation of dosage to the conditions peculiar to each case is, of course, always advisable wherever possible.

It goes almost without saying that the writer has always obtained the best results by careful study of each case, noting the usual time and appearance of the symptoms as well as maximum hyperacidity, and then instructing the patient accordingly. As a rule, the symptom of pain is a reliable indication and I believe the best plan is to administer the dose just before the usual time of the appearance of the pain. For instance, if the patient complains of pain commencing an hour after the meal, then I would give instructions for two 7½-gr. tablets, or 15 grains of powder, to be taken just before that time. Where there is a considerable food residuum from a previous meal or hyperchlorhydria is found on the empty stomach, then I recommend a similar dose before as well as after eating.

#### Summary and Conclusions

1.—Clinical evidence conclusively shows that the colloidal treatment of hyperchlorhydria, with or without ulcer, is a distinct advance in antacid therapy and that in many cases it is more effective than the alkalis, one important feature being that permanent relief of symptoms often results from its use.

2.—Permanence of results is attributed entirely to the *colloidal character of the product employed* in the treatment. Colloidal hydroxide of aluminum has been

shown to act, not by chemical neutralization as in the case of the antacids usually employed, but by *colloido-chemical adsorption*. The advantage lies in the fact that while neutralization favors systemic reabsorption of the acid radicle and consequently the ultimate aggravation of the hyperchlorhydric condition; adsorption, on the other hand, prevents reabsorption and serves to remove the acid radicle entirely from the system.

3.—Colloidal hydroxide of aluminum removes only the offending excess of acid from the hyperacid stomach, thus leaving a sufficiency for normal gastric digestion. Digestive disorders which often appear under an intensive alkaline regime are thus avoided.

4.—Colloidal hydroxide of aluminum adsorbs not only hydrochloric acid, but organic acids such as lactic, butyric, and acetic acids as well.

5.—Colloidal hydroxide of aluminum is nontoxic. No toxic symptoms have ever been known to arise, even when the product is administered in large doses over long periods of time.

6.—For best results a thorough and careful study of the etiologic factors which enter into the case is strongly advised, with appropriate adjuvant treatment.

7.—Diet is a matter of supreme importance.

8.—The quantity or dose of colloidal hydroxide of aluminum is not so important a consideration as time and frequency of dosage. A good average dose is 15 grains and its administration should synchronize, so far as possible, with the appearance of the symptoms. An hour or so after meals is usually the best time, but if hypersecretion on the empty stomach is found, it is well to give doses before the meal as well.

9.—The pharmacology of colloidal hydroxide of aluminum, in its relation to the treatment of gastric hyperacidity, is worthy of the careful attention of gastroenterologists and others interested in the treatment of stomach and intestinal diseases. It is an entirely new departure from the usual antacid regime employed in such cases, and, in the opinion of the writer, is a remarkable development of colloidal chemistry in its application to internal medicine.

My thanks are due to Dr. A. F. Stotts, Dr. V. Sillo, Dr. J. A. Robinson, and Dr. A. S. Tuchler for granting their permission to mention their names and reports in this paper.

## References

- 1.—Surmont, H., et Cauvin, J. Etude Clinique et Expérimentale d'un Hydrate d'Alumine Disperse. *L'Echo Médical du Nord*, p. 6, October 10, 1925.
- 2.—Ibid, p. 11.
- 3.—Comptes Rendus, Congrès de Médecine Française, Sixteenth Congress, p. 101, Paris, 1922.
- 4.—Guillermin, R. Hyperchlorhydrie et Hydrate d'Alumine Colloidal. *Revue Médicale de la Suisse Romane*, Lausanne, Switzerland, v. 44, p. 243, April, 1924.
- 5.—Surmont et Cauvin. Etude Clinique et Expérimentale d'un Alucol., p. 9, 1925.
- 6.—Chéinisse, L. Mouvement Thérapeutique — Les inconvénients de la Médication Alkaline Intensive. *La Presse Médicale*, p. 366, April 21, 1923.
- 7.—Cushney, A. R. Pharmacology and Therapeutics, p. 545, 1924.
- 8.—Hardt, L. L., and Rivers, A. B. Toxic Manifestations Following the Alkaline Treatment of Peptic

- Ulcer. *Archives of Internal Med.*, v. 31, 6, 171, February, 1923.
- Kantor, J. L. Antacid Gastric Therapy. *J. A. M. A.*, v. 81, p. 817, September 8, 1923.
- Shattuck, H. F.; Rohdenburg, E. L., and Bocher, L. E. Antacids in the Medical Management of Peptic Ulcer. *J. A. M. A.*, v. 82, p. 200, January 19, 1924.
- 9.—Surmont, H., et Dubus, A. Note sur l'action myxogène de quelques gels de bismuth au niveau de l'estomac. *Arch. des Maladies de l'Appareil digestif et de la nutrition*. No. 9, September, 1909.
- Arloing, F., Cadé et Bocca. Etude expérimentale de l'influence du carbonate de bismuth et du kaolin sur la sécrétion gastrique du chien. *Société de Biologie*, v. 1, p. 111, 1922.
- 10.—Schrijver, J. The Sippy Treatment for Gastric Ulcer. *Nederlandsch Tijdschrift v. Geneeskunde*, v. 2, p. 1751, Amsterdam, October 17, 1925. Quoted by *J. A. M. A.*, December 5, 1925, p. 1848.
- 11.—Surmont et Couvin. Etude Clinique et Expérimentale d'un Alucol, p. 15, 1925.

514 Chestnut Street.

## Guarding Buffalo's Health

By GEORGE B. LAKE, M. D., Chicago

THE gathering together of human beings in large cities has created a host of sociologic and sanitary problems which were wholly unthought-of a hundred or two years ago. Even after these problems developed, the tendency was to solve them one by one, leaving their solution in the hands of a number of unrelated agencies which were often jealous of each other's powers and letting the inhabitants get along as best they could by calling in a physician when they actually fell ill.

A new spirit is now developing in a number of our cities. The authorities are coming to recognize that, while the people are individual units in many ways, the city is also an individual unit in the community of municipalities, having certain large powers and correspondingly large responsibilities toward those who make up the population. The powers were seen and grasped long ago; the responsibilities are less readily assumed.

Out at the eastern end of Lake Erie stands one of the cities which has seen a vision of the matter of the health of its citizens as a whole and has realized that the adequate solution of the many complicated problems of municipal hygiene and sanitation is a question of self-preservation. That city is Buffalo, in Erie County, New York.

The care and disposal of sewage, garbage, and other wastes; the providing of adequate supplies of pure water; the supervision of the production and distribution of milk and other foods; and the control of epidemics are now generally recognized as proper functions of the municipality. That the city is responsible for the health of those of its inhabitants who are financially unable to pay for competent medical attention is not so generally recognized.

In 1910 the standing committee of the New York State Charities Aid Association submitted to the Common Council of Buffalo a report on the hospital needs of that city, based upon a general survey of existing conditions. This report was adopted, and thus Buffalo ceased to "muddle through" and entered upon the straight and solid road of a complete and coordinated plan for the care of its less fortunate citizens.

Under the authority of this adopted report, land was bought, funds were obtained and, in 1917, the Department of Hospitals and Dispensaries was organized for two stated objects:

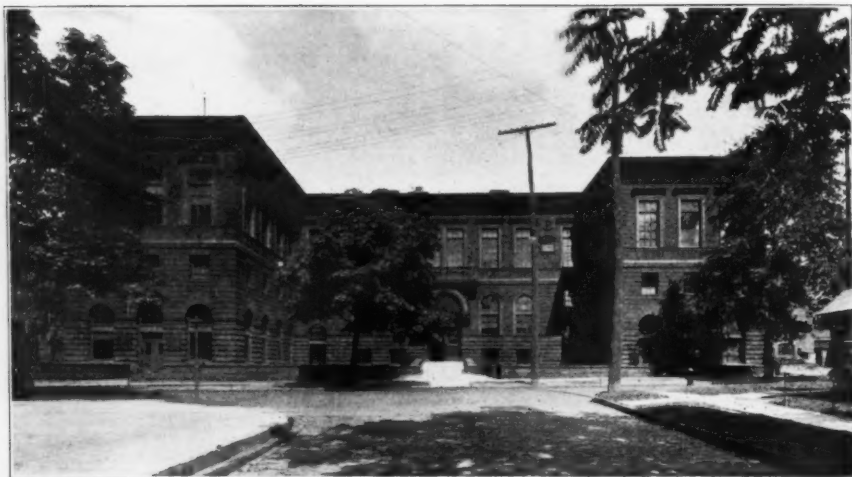
1.—To provide for all people in the county of Erie who are unable to pay therefor, free medical advice, diagnosis, and treatment.

2.—To furnish to the licensed medical practitioners of Erie County:

- A. Adequate hospital facilities covering all departments of medicine, at moderate prices;
- B. Free diagnostic assistance;
- C. Laboratory and x-ray service, either free or at reduced rates;
- D. Miscellaneous services.

A sincere effort is put forth to make this a genuine service and not to let it pauperize those who are able to pay. With this end in view the city hospitals and dispensaries are members of the Social Service Exchange and thus cooperate with and secure confidential information from all the various agencies concerned in public welfare work, such as the City Director of Public Welfare, the County Superintendent of Poor, the U. S. Public Health Service, the U. S. Veterans' Bureau, the Red Cross, and many other societies. In this way complete and reliable data can be obtained as a basis for deciding





The Medical School, University of Buffalo.

the amount of public assistance to which individuals or families are entitled.

At the various hospitals and dispensaries a complete list of very moderate fees for services of all kinds is established. These fees the patients are expected to pay if they can. If unable to pay in full they pay part. Free treatment is given only to those certified to receive it by the various welfare agencies. Thus the hospital and dispensary service is, to a considerable extent, self-supporting.

The Health Center Plan embraces three hospitals—the Buffalo City Hospital, the Municipal Hospital, and the Ernest Wende Hospital for acute communicable diseases; eight Health Centers, located in various parts of the city; and free clinics in urology, tuberculosis, mental diseases, drug addiction, dental work, prenatal instruction,

pediatrics (for sick and well babies), and general diagnosis.

At each Health Center there is a full-time City Physician in charge, with a part-time Assistant Physician, a full-time dentist, working eight hours a day, and two clerks. These Centers are open from 9:00 A. M. to 8:00 P. M. At other hours the sick can apply at the Buffalo City Hospital, or private hospitals are authorized to admit emergency cases at any time, at the city's expense.

All public medical agencies in Erie County, including the Medical School of the University of Buffalo, the City Health Department, and the District Nursing Association, are embraced in this scheme. All licensed physicians in the county may refer *pay* patients to any of the city hospitals and care for them there, but they cannot care



Aeroplane View of the Buffalo City Hospital.



A Fountain in the Hospital Grounds.

for patients who enter at public expense, these being attended to by the physicians employed by the city for that purpose. There is close cooperation between private physicians and the city clinics, and doctors are especially requested *not* to refer to the city hospitals or laboratories those patients who are able to pay for services by private institutions at the prevailing prices. All patients able to pay who apply at the city hospitals for treatment are referred to a private physician of their own selection. There are many other safeguards for the protection of the profession, whose recital would fill several pages.



A Typical Roof Garden. (There are five of these.)

The most conspicuous of the city's health agencies is the splendid Buffalo City Hospital, which merits rather extended and detailed consideration.

The City Hospital stands well out on the outskirts of Buffalo, but within the city limits, on an eighty-one-acre tract of land. It is a large and impressive-looking building of yellow brick, and when the present plans for new construction are completed it will be even larger and more impressive.

The staff is open. Any physician licensed in the state may apply for a staff position. The application is referred to the Chief of Staff and, if approved by him, the administrative board of the Medical College of the University of Buffalo, which maintains the closest cooperative relations with the hospital, passes upon it. If further approved

by the Board of Managers of the hospital, they make the appointment.

Regular members of the staff receive no pay from the hospital, except in special cases, but the members of the administrative staff are on full time and a salary, and internes receive \$40 per month, board, room, and laundry.

Any physician who is eligible for fellowship in the American Medical Association may, with the approval of the Chief of the Surgical Service, bring a patient into the hospital and operate upon him. In such cases the financial arrangements are between the physician and his patient, except that all patients are protected by the Hospital Board against any attempted extortion. In curettage cases, consultation with a member of the regular staff may be insisted upon without stating any reasons.

The personnel of the hospital consists of a staff of 200 members, many of whom are teachers in the Medical School of the University, thirty-three internes, sixty graduate nurses, 250 student nurses, and 254 employees in the various departments.

The hospital has 863 beds, divided among the services like this: surgery, 94; medicine, 104; obstetrics, 24—plus 38 cribs for babies; pediatrics, 24; urology, 94; psychopathic service, 38; tuberculosis, 312; acute communicable diseases, 135.

Most of the beds are arranged in wards of various sizes, as this is, primarily, a teaching hospital, and 75 to 80 percent of the patients are charity cases. Each bed has a corresponding wall-locker, where such articles as the patient needs in the ward may be safely kept, but all the street clothing is well taken care of in the clothing-room, where it is listed, disinfected, laundered, pressed, and all large garments are kept on hangers, protected by moth-proof bags.

The various classes of cases are arranged, so far as possible, in separate buildings or on separate floors. On every floor there is



Examining Room. (Each department has one.)

a ward laboratory where emergency examinations can be made without loss of time.

The diet rooms and service rooms on every floor are models of their kind. Every service room has a dish-sterilizer with steam under twelve pounds pressure. There is also an incinerator on every floor, and wherever, throughout the institution, there is a surgical wash sink, hot and cold water sterilizers are set up over it, so that no surgeon has to scrub up with tap water.



A Nurses' Alcove.

In every nurses' alcove—there is one on each floor—there is a steam-heated blanket warmer, a refrigerator, a complete sterilizing equipment, drug case, instrument case, narcotic safe, telephone, nurses' call system, and a toilet.

Contagious cases are all cared for in one building and the wards are exceptionally well arranged in units of one, two, four, and eight beds, so that several cases of one disease can be cared for together without any intermingling with cases of other maladies. Each of these units is completely equipped



Contagious Disease Clinic.

to function independently. There is a toilet and bath, with a full set of ward utensils and apparatus for washing them. Diets are served wholly by trays, and dishes are washed in the unit.

In connection with the contagious service is the very interesting contagious clinic, where all sorts of cases can be shown with-



One of the Pupil Nurse Homes.

out danger because the pit of the amphitheater is inclosed with a plate-glass wall, through which the students can see everything clearly, but no contagious material can pass.

In this contagious building is an intubation room, where a complete equipment of



One of the Operating Rooms, Showing Visitors' Gallery.

intubation instruments is kept sterilized and set up at all times, so as to be ready for emergencies.

The operating rooms, of which there are eight, have galleries for observers, where a clear vision of everything that goes on may be had through a sort of plate-glass skylight, which prevents them from inadvertently coughing or sneezing upon the site of operation or the instruments. There is a central nitrous oxide-oxygen station, from which these gases are piped to all operating rooms.

The department for the care of cases of tuberculosis has all the ordinary modern facilities for the care of such patients, including spacious sun-porches on the roof, and a number which are more or less out of the ordinary. A patient with tuberculosis of the larynx is shown giving himself a heliotherapy treatment by means of a reflecting mirror, while he directs the course of the



Taking Sunlight Treatment for Laryngeal Tuberculosis with Webb Mirror.

healing rays by looking in another mirror.

Many of the tuberculous children in this institution have been here so long that they practically know no other home. That the education of these little ones may not be neglected, the School Board has assigned a teacher, and regular sessions are held in the school room at which, in addition to the ordinary studies, various branches of manual training are given.

There is an excellent occupational therapy department, where psychopathic and other patients who would be benefited by such measures may do interesting and useful work with their hands.

The hydrotherapy department is adequate and well equipped.



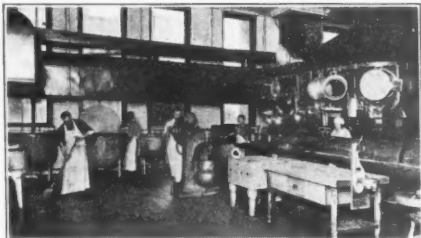
The Clothing Room.

The x-ray room has thick, barium-plaster walls, which effectually prevent any leakage of these highly penetrating and sometimes dangerous radiations.

The nurses work in three 8-hour shifts, and, as the hospital is closely associated with all of the city's health activities, the pupil-nurses frequently go out on district nursing service, thereby gaining much interesting and practical experience.

A barber-shop is maintained, the barbers being paid by the hospital, and this service is free to the patients.

All clinical material in the hospital is at the disposal of the medical students of the University of Buffalo, and the quantity and variety of this material are great. The out-patient clinics are used in the same manner. These weekly public diagnostic clinics would make a fascinating subject for an entire article, but here and now one can only say that the most interesting cases from all of the seven health centers throughout the city are brought here to these clinics and exhaustively threshed out for the benefit of the students and physicians in attendance, as well as of the patients themselves. Complete reports of these elaborate examina-



A Corner of the Main Kitchen.

tions are mailed to the physician with whom the case originates.

Under the heading of "Miscellaneous Services" the Department of Hospitals and Dispensaries furnishes to worthy persons, at very small expense or free, tonsillectomies, intubation service, post-mortem examinations, lunacy commitments, cystoscopic examinations, and the distribution of eiweiss milk. All of these services are rendered *only upon the recommendation of a licensed medical practitioner.*

The importance of the service, which has been so briefly sketched in this article, to the citizens of Buffalo and Erie County can be realized from the statement that, in 1921, 192,213 visits were made by patients to the various city hospitals and dispensaries. The work has enlarged considerably since that time.

In addition to the public health agencies, Buffalo has fourteen privately controlled hospitals having a combined capacity of nearly 2,000 beds.

The time is surely coming—and the sooner the better—when every city in the country will adopt an enlightened health policy such as that in operation in Buffalo.

# Surgical Seminar

Conducted by GUSTAVUS M. BLECH, M.D.

[Note: The Seminar is devoted entirely to the practical interests of surgeons. Problems and their discussions are solicited. Contributors must give their names, but whenever desired these will not be published. Questions for this department should not exceed fifty words. Address all communications for the Seminar to Dr. G. M. Blech, 108 North State Street, Chicago.]

## Surgical Diagnostics (Continued)

**Mensuration.** In most instances, exact measurements of pathologic lesions, parts of the body, new growths and the like, are of no special importance, and one can visualize size and dimensions by comparison with well-known objects. Coins, nuts, eggs, fruits, the palm of a hand, the breadth of one or more fingers, a child's or a man's fist are accepted as conveying surface or height dimensions with a reasonable degree of exactness.

When, however, it is desired to be mathematically exact, simple measurement with a tape or other standard means of measuring length or height will prove satisfactory. One measures in inches or centimeters surface lesions of magnitude in order to preserve a record for future reference. But the circumference of one-half of the chest or abdomen or of one upper or lower extremity can be measured and compared with the opposite side or member.

While the trunk and the extremities present certain difficulties to obtaining exact measurements, deviations can be made so small as to be ignored, provided one uses uniform methods throughout. We prefer a metal tape measure because it cannot be wrinkled or applied unevenly, as is the case with a linen tape measure. One must guard against uneven degrees of compression of the skin and subcutaneous tissues. The position, too, plays an important role. If the left chest be measured directly over the nipple, then the right chest must be measured at exactly the same level. The same applies to the abdomen and extremities.

Measurement of the neck presents certain difficulties when the growth or swelling is not lateral. A struma affecting the middle of the neck more or less evenly to each side of the midline of the trachea will give equal dimensions for either half of the neck. Ac-

cordingly, when it is desired to arrive at some estimate of the size of the growth the neck must be studied from the profile.

Often pathologic conditions of the chest, abdomen and head result in universal enlargement as has been described for the neck with a middle growth, that is to say both sides are equally affected. Measurement of the entire circumference of an abdomen with ascitic fluid conveys a good idea as regards the size of the enlargement. Measurements after treatment to determine the degree of reduction of the circumference must, to be of value, be made at the same level, usually the umbilical horizontal line. The same rule applies everywhere.

Our technic becomes a little more complicated when it comes to the measurement of length, particularly of the upper and lower extremities.

It goes almost without saying that when comparing an affected extremity with its corresponding neighbor, care must be taken that both are held in the same position with reference to the trunk. If the entire length of a leg held in flexion at the knee is to be measured, the other leg must be placed in the same degree of flexion to obtain reliable figures for comparison.

I have successfully tried out the following guide points: The arm is best measured from the acromion, via the external condyle of the humerus, to the styloid process of the radius in either direction. Points of measurement for the lower extremity are the anterior superior spine of the ilium, the top of the trochanter, the middle point of the external aspect of the knee and the apex of the external malleolus. These definite points can be easily determined on either extremity and if some care be exercised not to slide the skin over the points when measuring, each extremity can be repeatedly measured, between points or in its entirety, with reliable results.

Suppose it is found that one limb is shorter than the other—what is now more simple than determining which part of the altered extremity is the one affected? In other words, by measuring between the points above given one is in a position to determine whether shortening is due to a



pathologic lesion or condition in the upper or in the lower part of the concerned extremity (arm or forearm, thigh or leg).

Of special importance to surgeons is the determination of the position of the middle meningeal artery in the event one has to ligate that vessel quickly to save life.

While there are special measuring appliances, these can be spared if one draw two horizontal lines. One, the lower, begins at the lower margin of the orbit and proceeds via the zygomaticus to the external auditory canal—a line representing the lower horizontal of the skull (Kroenlein); the other, an upper line, runs parallel with the first, from the upper margin of the orbit to and beyond the ear, representing the upper horizontal line of the skull. If now a line be drawn from the middle of the zygomaticus of the lower line vertically towards the upper line, the point at which this vertical line strikes the upper line corresponds to the anterior branch of the middle meningeal artery. Another vertical line drawn along the posterior margin of the mastoid process towards the upper line intersects with that line at a point which corresponds with the posterior branch of that artery.

By a prolongation of certain lines and the aid of crosslines one can determine the motor region of the brain, but these matters will be discussed when we come to speak of the diagnosis of brain lesions.

I hardly think it necessary to do more than invite attention to the facility with which the pelvis can be measured with a simple pelvimeter plus the surgeon's fingers. All this is part of the elementary training in obstetrics.

Often it is advisable to determine the degree of mobility of partially ankylosed joints. For this a simple caliper or compasses used by carpenters or other artisans to determine the degrees of an arc will be found very satisfactory.

The general surgeon hardly requires the complicated appliances used by modern orthopedic surgeons. The various degrees of curvatures can be measured and traced on paper by a simple lead strip; and by placing the sole of a foot, lightly coated with printer's ink, on a clean sheet of white paper and ordering the patient to bear down on the foot with the entire body weight, the degree of sunken arches can be visualized with considerable accuracy. In Germany they paint the paper with a solution of ferric chloride and the sole of the foot with an alcoholic solution of tannic

acid. The result is a beautiful blue imprint of the sole, which can be kept on file indefinitely.

But after all has been said, the most important instrument for surgical diagnosis is—the surgeon's fingers. By palpating one obtains an incredible amount of information. Palpation is something that cannot be taught. It is an art which must be acquired through serious application and intelligent practice, but the principles underlying successful palpation and something of its technic can be described with some promise of profit. This we will endeavor to do in the subsequent issue.

(To be continued)

#### Discussion of Dr. W. D. Lane's Case

*Recapitulation.* (See August issue, pp. 572-3.) Dr. W. D. Lane, of Bad Axe, Mich., contributed the following interesting experience: A nurse, 24, with a history of marked constipation of six years' duration; regular but painful menstruation, accompanied by nausea and vomiting; scarlatinal nephritis at 15; influenza January last; dysentery of fifteen hours' duration in March last; and no other familial history, except that a number of her brothers and sisters had had appendicitis, awoke in the morning with cramps and nausea which were eased by a few loose bowel movements. The patient believed this due to her menstrual function at that time. A few hours later and in the evening the patient admitted that she felt much better and hoped to return to work the next day. Abdominal examination negative; vaginal, practically negative. Menstruation ceased. After a comfortable night the patient's pains were worse and she vomited several times. Now there is tenderness and rigidity in the left lower abdominal quadrant, while the appendiceal region and right side are free. Pulse and temperature being normal and the white blood count only 10,000, a twisted ovarian cyst was suspected, but an immediately performed laparotomy revealed an abdomen filled with pus due to the ruptured appendix found at the midline with the cecum adherent to the uterus.

After an uneventful convalescence of two weeks the patient developed pyothorax on the left and in spite of aspiration and rib resection died from general septicemia.

#### Discussion by Dr. E. C. Junger, Soldier, Iowa

I am sorry for Dr. Lane, but if he does not want to age prematurely he should re-

alize that the fatal outcome of this case is due to no fault of his. I wonder how many of the Seminar readers will appreciate the circumstances characterizing this unfortunate situation. Here we have a hospital nurse. She has had some training and, as is the case in all walks of life, people with a little learning are rather hard people to handle. The patient's past history in itself is misleading enough to lead any examiner astray, particularly in the face of an accompanying menstrual "storm," and certainly Dr. Lane, as many another conscientious surgeon would have done, hesitated long enough in order to give a subordinate coworker in his hospital the benefit of the doubt. And there was not a scintilla of reason or evidence to caution him that his really human course was erroneous.

What caused it all? One is inclined to think that in this particular case the overproduction of colon bacilli may have been the cause of a hematogenic infection which carried thrombi to the appendix. At first there was inflammation and protective reaction (the adhesions of the cecum and uterus seem to indicate that); then came virulent suppuration, too virulent for an increase of the leucocyte count and rise of temperature. But the normality of the pulse remains an enigma. Verily we still have much to learn and I desire at this time again to express to CLINICAL MEDICINE my appreciation of the inspiring and beneficial service given the readers in the columns of the Seminar.

**Discussion by Dr. M. O. Robertson,  
Bedford, Ind.**

I wish to thank Dr. Lane for reporting this very interesting and instructive case. No doubt the patient herself and the absence of physical findings served to influence Dr. Lane to delay laparotomy. I am very eager to see how the readers of the Seminar feel about this case because I, too, would have waited twenty-four hours under the circumstances. I am not so sure that I would have managed the case as ably as Dr. Lane did after operation, but I feel certain I would have taken the expectant attitude before operation. While it must be admitted that there is too little risk in an exploratory laparotomy, when a serious surgical condition exists, the character of which cannot be determined with certainty, to subject the patient to the greater risk of "watchful waiting," still one will not operate unless there is at least the evidence

of a serious surgical condition. After all, every unnecessary operation leaves one's conscience troubled.

I feel that this case has important and, now, self-evident lessons for us. While I was in the Orient I had a very efficient native assistant who once asked me what use there was in reading books when the cases did not act up to the textbook descriptions. I am reminded of this naive saying because this case compels the physician to appreciate that many cases with comparatively simple diagnoses have phenomena which do not fit into any of the accepted schemes.

I congratulate Dr. Lane on his ability and thank him for presenting a very instructive situation to the readers of the Seminar.

**Discussion by Dr. F. W. Schroeder,  
Strasburg, Ill.**

Those who have had similar experiences will agree that Dr. Lane has no reason to criticize his professional conduct in the case under discussion. As a matter of fact, had the patient recovered every one would have conceded that he had managed it most skillfully.

Now that the termination has been fatal, however (what a fine occasion to give the laity and other thoughtless critics occasion for unjust and baseless criticism), we all are agreed that the abdomen should have been opened at once. But it must be remembered that this is reasoning *post hoc*, for it is a difficult situation that presented itself at that time, and Dr. Lane no doubt felt that, in spite of the comparatively harmless symptoms, all was not well. But how is one to justify the mere "sensing" of a hidden grave condition when an operation proves the uselessness of it?

To this I feel like adding another proposition. Let us assume that Dr. Lane, by prophetic instinct or by an uncommon sense of "prognostic fear," would have been able to describe the exact hidden pathology on his first examination and would have operated at once. Would he have saved the patient's life? I doubt it. The operation was performed within twenty-four hours of the attack and the patient got along very well for two weeks. It was only after that period that the complicating infection of the chest necessitated surgical intervention, which did not prevent death from septicemia.

Supposing that Dr. Lane had operated at his first visit and found free pus in the abdomen. Would that have prevented the complication? How many times have surgeons operated promptly for what appeared even "clean" cases of appendicitis, and yet, after an apparently normal convalescence, the patients perished from one abscess after another—pyemia! I know an eminent surgeon who operated on his most favored niece—a girl about nine years old—within two hours after the first attack of acute appendicitis. At his hands, tried by thousands of successful operations, skilled to the highest degree of human perfection, the little patient certainly was considered lucky at that time. Yet pyemia followed and the eminent surgeon nearly lost his life by the intensity of his grief. Other experienced surgeons can tell similar stories, which are now too common to merit publication in the contemporaneous surgical literature. But Dr. Lane's case has this peculiarity that it gave no warning of an imminent explosion. Therein lies its great instructive value.

**Discussion by Dr. B. B. Parker, Parker Hospital, Allerton, Iowa**

Although the past and familial history might have led one to suspect appendicitis, a negative examination was bound to be misleading and I feel that Dr. Lane need not criticise himself and, certainly, no one else has a right to do so.

Left-sided pain and tenderness does not exclude appendicitis. An interesting case in my experience proves this. It concerned a man of 50 with an acute abdominal attack. Pain, tenderness, and slight rigidity were confined to the left lower quadrant. Operation revealed a long, inflamed appendix with the base at about the midline and the tip attached to the sigmoid colon. It may not be without interest to report that this patient, too, developed empyema, but eventually recovered.

We have been taught that appendicitis does NOT produce diarrhea. Dr. Lane's case seems to confirm the truth of the old saying: "*nulla regula sine exceptione.*"

**Editorial Note**

I have already commented on Dr. Lane's case at the time it was presented. I have received an avalanche of letters all sending Dr. Lane messages of their moral support. Dr. Lane should find some satisfaction in the fact that even in defeat he has his triumph. I have been compelled to restrict the discussions. Dr. Junger is well known

to the readers, and Dr. Robertson promises to become a regular collaborator. Dr. Schroeder is a newcomer and his manner of discussion betrays him as a splendid surgical thinker. I hope and trust he will become and remain an active member of the Seminar family. Dr. Parker writes so well and to the point that I hope he, too, will favor us more often with his very able discussions.

**Discussion and Solution of Problem No. 7**

*Recapitulation.* (See August issue, p. 573.) A man, 32, without any history and in the midst of health experiences chills and soon after notices a painful swelling behind the right ear. There is some dysphagia. Physical examination shows that the swelling is over the right parotid, hard and inflamed with edema from the forehead to the clavicle. The most prominent part of the swelling is over the angle of the lower jaw. In spite of great difficulty in swallowing, neither the throat nor anything else shows anything abnormal. The patient looks very ill and has a temperature of 103°F.; pulse 90; respiration 24. The flow of saliva is greatly increased and annoys the sufferer.

The requirement calls for the diagnosis and differential diagnosis, prognosis and immediate therapy.

**Discussion by Dr. B. B. Parker, Parker Hospital, Allerton, Iowa**

The diagnosis lies between parotid abscess and epidemic parotitis; the weight of the evidence being on the side of abscess.

The sudden onset with rapid tumor formation, preceded as it was by lymphadenitis, coupled with extensive edema and salivation, point directly to an acute inflammatory process.

The treatment indicated is immediate incision over the most prominent point of the swelling. The incision should be ample and parallel to the course of the facial nerve.

The prognosis is favorable, provided the disease has been recognized early and incision is made before the deeper part of the parotid gland has become involved.

**Discussion by Dr. E. C. Junger, Soldier, Iowa**

Apparently this man has an acute attack of mumps. Care must be taken before making a definite diagnosis to exclude focal infection about the teeth, ulceration of the throat or cheek or ulcer of the auditory canal. The swelling behind the ear indi-

cates an acute lymphadenitis, and in all such cases it is wise to keep an eye on the mastoid process.

Personally, I should prefer to apply ice topically, administer an antipyretic and a brisk purgative.

If the swelling persists and the pain continues incision of the swelling at the point where fluctuation is most plainly felt, and subsequent treatment by drainage is the sole rational procedure to follow.

#### Editorial Comment

The requirement calls for the *differential* diagnosis. In cases of the type presented this is of greatest importance, because rational therapy depends on the correctness of the diagnosis.

The first question that each practitioner must ask himself is, when confronting an acute swelling of this character, whether it is really the parotid gland which is affected; and if so whether it is epidemic (commonly designated as mumps), primary or secondary.

The differentiation is first to be made from:

- 1.—Inflammation of the submaxillary gland.
- 2.—Periostitis of the lower jaw, and
- 3.—Angina Ludovici.

Taking these into consideration, it will not require extraordinary diagnostic ability to exclude all of them and there still remains the question of a lymphadenitis. I, for one, am inclined to think that even in experienced hands diagnostic errors, at least at the early stage of the disease, will not always be avoided with certainty, but so long as a practical surgeon does not attempt to make snap diagnoses and guards himself against the possibility of error he will make no mistake therapeutically and thereby will prevent disaster. He must say to himself that in mumps (epidemic parotitis) the mighty swelling is very little sensitive to pressure, that the pains radiate towards the ear and that there is a certain degree of inability to open the jaws. But the skin over the swelling is tense and pale.

Whether or not one has to deal with a lymphadenitis following an angina is a real problem, since the clinical picture is very similar, but the anamnesis and the deeper location of the swelling (which is usually behind the mandible), in the latter form will leave no doubt.

We can eliminate from our discussion secondary or postoperative parotitis, tempt-

ing though the subjects are, because the problem plainly indicates that the patient has no illness and certainly did not undergo any surgical operation.

Has he a primary parotitis? Two characteristic things speak for this malady, namely, the extent of the swelling with the edema involving virtually one side of the face and neck, and the pain on swallowing. But the principal thing to be elicited is the fact that the swelling begins at and is most prominent at the angle of the lower maxillary. There can therefore be no further doubt that we have to deal with an acute primary parotitis.

We know that while mumps does not terminate in suppuration, acute primary parotitis usually does. Of course proper incision and drainage is the sole therapy to be considered, but Dr. Junger has brought out that the incision should be made where fluctuation is palpable. That teaching is all right, but acute parotitis is a comparatively rare affection, and in thirty-five years of a busy life I have been fortunate enough to see only three undoubted cases and in none of these could I detect a soft spot, for the simple reason that the suppurative process lies deep under the tense fascia. I, too, made longitudinal incisions as suggested by Dr. Parker, but these should be made along the posterior margin of the angle of the lower jaw. Perhaps a slightly curved incision is best.

It may be that patients can get well without incision, but I would advise no one to take that chance.

While I have been able only hurriedly to go over the literature—I am under orders to go to training camp at Carlisle for two weeks, and the unexpected vacation affects me like a school boy anxious to throw away his books—I find sufficient evidence that nonoperative therapy leads to sepsis and death.

#### Discussion of Error No. 4

*Recapitulation.* (See August issue, p. 573.) A mining engineer, aged 30, complains of slight dysuria and an annoying hyperesthesia in the perineal region. His past history shows two previous attacks of acute specific urethritis, which were treated by himself with permanganate of potassium solution, and while the acute attacks subsided, there remained the symptoms complained of, plus an occasional *goutte miliaire*.

Examination by a physician showed gonorrheal shreds, demonstrated as such micro-

scopically, but a large metal sound passed into the bladder without difficulty. On rectal examination the physician noticed several small hard tumors closely beneath the rectal mucosa and apparently part of the slightly enlarged and tender prostate. The seminal vesicles could not be mapped out by the examining fingers. The treatment recommended was perineal prostatectomy.

Let us assume that you examine this same patient for an opinion. The small growths are actually there and are felt as medium-sized bird shot, imbedded close to the posterior surface of the prostate. While the prostate is tender to touch, the size cannot be mapped out. The requirement calls for criticism of the diagnosis and treatment recommended by the first physician.

**Discussion by Dr. E. C. Junger,  
Soldier, Iowa**

There can be no doubt, in view of the history and the findings, that we have to deal with a case of chronic posterior urethritis of a specific character. As regards the little bodies found on palpating the prostate per rectum, these are infected lymph glands. In cases of this kind instrumentation is very likely to aggravate any existing infection. Certainly no sounds should be introduced into the urethra, nor is any surgery indicated.

Patients of this class are best treated with sedative rectal suppositories locally. In addition, fluids should be administered to flush the kidneys. Balsamic preparations and vaccinothrapy are indicated.

**Discussion by Dr. H. O. Strosnider,  
St. Francisville, Mo.**

Had this patient had a prostatic adenoma, the physician would have found a large smooth growth and the enlargement would project into the bladder, so that a large sound could not have been passed (DaCosta).

Why was it that the first examiner was unable to map out the prostate as regards its size, and the seminal vesicles? Prostatic examination is never complete without expression of the gland and thorough macro- and microscopic examination of the obtained fluid. In specific prostatitis the gland is enlarged and smooth, but often scattered nodules are felt and massage yields pus or mucopurulent fluid. There may be coexistent tuberculosis, but then the prostatic gland would be enlarged and irregular in outline and the seminal vesicles are almost universally involved. Cancer of the prostate must be borne in mind, but this would be

recognizable by unusual hardness, almost like that of a stone, and there would be adhesion to the neighboring tissues. In malignancy, massage of the prostate would yield nothing or, at best, a small amount of blood-stained fluid.

**Discussion by Dr. B. B. Parker,  
Allerton, Iowa**

As tuberculous infiltration follows on the heels of a posterior urethritis, I would be inclined to accept that this case was tuberculous instead of adenomatous. If the diagnosis of tuberculosis be correct, then the treatment should be antituberculous rather than surgical in character. It is well known that surgical intervention, even in a well-defined tuberculous focus, is apt to be followed by troublesome sinus formation.

**Editorial Comment**

This can be very brief. The history is plain and the gonococcal evidence is unmistakable. If this patient has a stricture, it is of large caliber and does not interfere with the act of micturition. Not only do I NOT condemn the use of sterile urethral sounds, but I know that this instrument is invaluable in the treatment of chronic urethritis. Now, what do we find on reexamination? Nothing but a history and evidence of chronic gonorrheal urethritis and prostatitis. That accounts for the symptoms as given and for the tenderness of the prostatic gland without one being able to map out its size, the swelling not being large nor demarcated enough for palpation.

That none of us could determine the vesicles is nothing rare nor new. They cannot always be mapped out, and under such circumstances, in the absence of a microscopic and cultural examination of the ejaculate, we have no right to speak of disease of the seminal vesicles.

So far so good, but what about these shot- or pea-sized, hard tumors, plainly palpable by the examining finger pressing against the prostate? These are to be looked upon as normal structures, for these little hardened glands are encountered again and again in normal human beings on rectal examination, without their carrier or the physician suspecting their presence, because they do not produce any symptoms.

Certainly in a young man of 30, and one without definite indication for prostatectomy, the suggestion of this operation was erroneous and based on a false conception that the patient suffers from adenomatous growths. Even if this be so, these growths



should not have been looked upon as harmful, interfering with the prostate or welfare of the patient, and surgery is a bold and inexcusable error.

Cases like this are best treated by massage of the prostate, hot sitz-baths and urinary antiseptics for the temporary dysuria (probably due to cystitis of the trigonum), after which any of the classic methods for the treatment of chronic urethritis are indicated.

#### Problem No. 9

*By Dr. L. Chapman, Grand Falls, N. D.*

A man, 76 years old, was in good health up to about two years ago, when he suffered from an attack of influenza which left him with considerable loss of use of the lower limbs. Since that time he gradually lost weight, but aside from anorexia had no other symptoms.

On September 9, 1925, he was seen because of pain in the large toe of the right foot, due to an ulceration consequent to an ingrowing toe nail, which became infected by the patient's efforts at pen-knife surgery. The nail was removed under local anesthesia and hot, moist, antiseptic dressings were applied, with satisfactory result.

On or about November 1 the patient again complained of intense pain and the

toe presented an unmistakable picture of septic gangrene. For three weeks the only relief that could be afforded was through opiates, because the patient absolutely refused amputation until the gangrene extended to about one-half of the anterior part of the foot. Amputation below the knee was performed as rapidly as possible by the circular flap method, because of the presence of a poorly compensated mitral lesion.

The posterior flap sloughed to a considerable extent, but there was no pain and the wound was soon healing by granulation.

The postoperative history shows that the patient sleeps fairly well, but that his appetite is still very poor. Aside of a rise of temperature during the period when the flap was sloughing he had no fever. At the worst time the temperature did not rise above 100°F. The pulse was 90 to 95 and intermittent, just as it had been before the operation. He is constipated and requires low enemas. The patient is undernourished and attempts at feeding fail because he becomes nauseated. He appears to be failing gradually.

*Requirement.* What is the diagnosis in this case, from the history and data given? What is the prognosis? Was Dr. Chapman's treatment rational? What treatment, other than that given, is indicated?

## Dysmenorrhea

**REMEMBER** that dysmenorrhea is only a symptom of some lesion of the pelvic organs, manifested by painful menstruation.

**REMEMBER** that the slight discomforts felt by the majority of women during their menstrual periods should not be spoken of as dysmenorrhea.

**REMEMBER** that dysmenorrhea is found in young girls, with ante flexion of the uterus or an extremely small canal.

**REMEMBER** that pelvic inflammation with the additional congestion incident to menstruation will cause dysmenorrhea.

**REMEMBER** that retroflexion may (though not always) cause dysmenorrhea.

**REMEMBER** that neuralgia, rheumatism, and gout may cause dysmenorrhea of a very troublesome type.

—Norberg: "Golden Rules of Gynecology."

# Clinical Notes and Practical Suggestions

## Ultraviolet Rays in the Toxemias of Pregnancy

"**D**OCTOR, come quick! Mrs. A— is very serious." No need to explain further. The doctor has already sensed what has happened and seizing his emergency bag (always ready?), leaving perhaps some dismayed patients in the outer room, he dashes off.

Let us consider Mrs. A— briefly. This may be her first pregnancy or it may be her tenth. It may be the first time she has ever experienced distress or that may be a regular characteristic of her pregnancies. In the typically preeclamptic toxemias, the patient usually has the same difficulty in adjusting her metabolism to the requirements of gestation in each succeeding pregnancy. Sometimes I have seen a patient who has come to expect a **great deal of discomfort** because of previous experiences, pleasantly surprised by not only a complete absence of headaches, nausea, etc., but actually a sense of greater vigor and well-being than at other times.

In a true pregnancy nephritis, it is surprising how frequently the urinary disorder will clear up with the removal of a devitalized tooth or an impacted molar. About 90 percent of the cases coming under my observation have been what I would term nephritics. The predominating symptoms are those of nephritis. In the experience of the general practitioner true eclamptic convulsions must be a rare occurrence. The milder forms of toxic disorders, however, are present in some degree in one out of every three cases. It is here that the chemical effect of ultraviolet rays becomes a great boon in lessening the burden of child-bearing.

### Chemistry of Pregnancy

The exact nature of the disturbance to intermediary metabolism in these cases is largely a matter of conjecture. Attention has been called to a possible sensitization of the mother to the embryonic proteins, the

relation of the placental secretions to ovarian function. That the function of the thyroid and parathyroid is subject to grave disturbance in gestation is beyond question. These patients with persistent eclampsia are a "pituitary type—obesity, masculine pelvis, masculine distribution of hair, thick skin."—(Greenhill, New York Lying-In Hospital.)

With the possible exception of pernicious vomiting the symptoms are the same as those we see in ordinary hyperthyroidism and parathyreopriva. Recent experimental work has brought out more evidence of the probability of a deficiency occurring in the parathyroids during pregnancy.

Sherman and McLeod have shown that there is a 10 percent loss of total body calcium during pregnancy and lactation in the rat. There appears to be a greater calcium content in the long bones of virgin female rats, as compared with the male. The same relationship has been observed by Reach in mice.

The precise relationship between calcium metabolism and the parathyroids is a difficult problem in physiological chemistry, but that a change in one influences the other is indisputable. For example, it has been known for years that the convulsions of parathyreopriva can be controlled by administering calcium. McCollum's work on the relationship of calcium to the parathyroid function is well known. In 1921 Kramer and Tisdall investigated a series of cases of infantile tetany and found the blood calcium was invariably low.

Freudenberg and Gyorgy are of the opinion that the relationship of ionic calcium to total calcium in the blood serum is important and that a relative calcium deficiency sometimes exists in conditions of alkalosis. This means that the action of the calcium ion in determining cell irritability is a specific one and cannot be replaced by other alkali earths.

Clinical observations that indicate a calcium deficiency in pregnancy are well known. The old saying, "For every child a tooth," is an example of this. Experimental work emphasizes the far-reaching effect of such calcium deficiency and its close association with other endocrine disturbances.

#### Effects of Ultraviolet Rays

Because of its well-known effect on calcium and phosphorus fixation, ultraviolet radiation treatment is rationally indicated when symptoms of toxemia and nervous irritability develop. Its action on the thyroid and other endocrines is an additional reason for advocating such radiation during pregnancy. Studies made by Jas. A. Harrar of the New York Lying-In Hospital showing the high incidence of eclampsia in the spring months are further corroboration of the relationship of ultraviolet rays to a well-balanced metabolism.

The remarkable characteristic of such treatment is the immediate and lasting response that is so frequently encountered with a single radiation. The cramps in the extensors of the legs and nervous twitchings, the sensitiveness to sudden noises, the backaches may all be symptoms of a calcium deficiency or parathyroid disorder. I have seen few events more gratifying at least than the remarkable relief obtained from such symptoms following an occasional irradiation of the entire body with ultraviolet rays.

\* The sooner the treatment is begun, with the first symptoms of discomfort, the better the results will be. As a general tonic measure it is advisable to begin with one treatment weekly as soon as pregnancy is diagnosed. If this is not sufficient to prevent hyperemesis, etc., increase the frequency and duration of the treatments according to skin tolerance. After the sixth week of pregnancy it is not necessary to give weekly treatments to a normal patient if she has already had two or three treatments. Such a patient should, however, have an occasional treatment up until the middle of the sixth month and bi-weekly after that until term.

Cases with pernicious vomiting receive more immediate relief if a third degree erythema is laid down on a 5x9-inch area on the anterior abdominal wall. According to La Roe this, combined with an ordinary radiation of the entire body, should give immediate relief. In fact, he claims it is

good technic to lay down a second exposure of like intensity and duration within forty-five minutes of the initial one if relief is not experienced.

#### Ultraviolet and Lactation

Another reason why an occasional ultraviolet irradiation is important to the expectant mother is its influence on lactation and its effectiveness in preventing rickets and digestive disturbances in the child. I recall at least one patient who had had four children, none of whom had been able to secure sufficient breast milk beyond the second or third week from birth. During her fifth pregnancy she received an occasional radiation from the air-cooled mercury quartz lamp. The effect on her general well being was unquestionable. She had had two goiter operations in previous years and had occasional symptoms of thyroid insufficiency, including headaches, cardiac irregularity—the pulse becoming very slow and thready at times—constipation and nervous irritability. There was a complete absence of such distress after the ultraviolet was applied. Following delivery there was a copious supply of breast milk and the baby thrived on the breast for eight months of normal lactation.

Lactation is just as great a drain on the calcium reserves of the body as pregnancy. The non-pregnant, non-lactating animal can be kept on calcium equilibrium with 3 gm. per diem to each 100 pounds of body-weight. On the other hand, Meigs has estimated that a cow loses 1300 gms. or 19 percent of her total calcium in 133 days of lactation.

If the blood calcium is already seriously depleted before delivery, the mother is at a disadvantage to begin nursing. Those who have made a serious study of the matter, such as Hess of Columbia and Wyman and Weymuller of Boston, assure us that 90 to 95 percent of all children show evidence of rickets at one time or another. Every case of malnutrition or difficult feeding is a potential case of rickets.

Under the circumstances and the present dietary and living habits ultraviolet irradiations are a valuable health measure for everyone. To the expectant mother, they are an indispensable necessity.

G. J. WARNSHUIS,

Milton, Wis.

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A birth certificate from the State Department of Health, for the baby, is more important than a license plate for an automobile.

### A CORRECTION RE HYOSCYAMINE

In the editorial on hyoscyne and hyoscyamine, on page 620 of the September number of CLINICAL MEDICINE, occurs the statement that hyoscyamine contains enough hyoscyne to render it more sedative than atropine. This is, of course, an error, as the statement was meant to apply to the crude drugs hyoscyamus and belladonna. Hyoscyamine is a distinct drug and contains no hyoscyne whatever.

### THE EYE IN DIABETES\*

It has long been understood that cataract is common in diabetics. Histologically, this so-called diabetic cataract is indistinguishable from the senile form, the only point of differentiation being the pigmentary changes which occur. In diabetic cataract the pigment cells appear to break loose from the choroid structures and come out into the aqueous, producing the "black aqueous" which is sometimes seen after an iridectomy on a diabetic. Cataract occurs in from 16 to 53 percent (according to various observers) of all diabetic patients.

Sudden and complete blindness (amblyopia) is less frequent than cataract in diabetics; keratitis and uveitis are comparatively rare; retinitis occurs in about 25 percent of cases; and ocular palsies in from 4 to 7 percent.

In studying ocular opacities the slit lamp is now widely in use. This lamp works on the same principle as a beam of light which, entering a dark room, renders all the floating dust particles visible. The things which are brought to view by this beam of light are then studied by means of a small, binocular microscope which gives a magnification of from 12 to 105 diameters.

The use of the slit lamp on a large group of patients over 70 years old showed that 90 percent of them had opacities, either macroscopic or microscopic. The microscopic opacities do not interfere with vision and the patient who has them should not be alarmed by being told he has cataract. If he insists upon a name for his condition, call it *Phacosciasma*, which is perfectly scientific—but meaningless to him.

Cataract is rare before the age of 30 years, and there seems to be little or no greater incidence of this condition, in groups

of similar age and under similar conditions, among those who have diabetes than among those who have not.

The only points for the diagnosis of diabetic cataract are that it is a bilateral, symmetrical, anterior subcapsular, rapidly progressive (a question of months) lenticular opacity, leading to complete blindness and occurring in persons under 40 years of age who are suffering from diabetes. This is a nutritive disturbance whose exact nature is unknown, and the use of insulin and a carbohydrate-free diet will not stop its progress when once it has started. The symptoms noted do not occur early and are merely an aid in diagnosis. Diabetic cataract should not be diagnosed in persons over 40 years old.

Formerly there was little hope to offer patients with diabetic cataract because it was dangerous to operate on one whose blood contained acetone bodies, diacetic acid and much sugar. Now we can bring the body chemistry practically to normal and operate upon these cases as safely as upon cases of ordinary senile cataract. They need not be *absolutely* normal. If the urine is sugar-free and the blood-sugar low, so as not to form a medium for the growth of *Staphylococcus albus*, the patient will do well. If the blood-sugar is above 1.8, any operation is dangerous. The acidosis is of more importance than the sugar, and this must be corrected.

*Retinitis* may, of course, occur in a patient who has diabetes, but there is no such clinical entity as diabetic retinitis. All diabetics with retinitis have been found to be also nephritic or pre-nephritic or to have high blood pressure. In twenty-four diabetics with retinitis the average systolic blood pressure was 175 mm.; while in thirty who had no retinitis the average was 130 mm.

Hirschberg states that there are three distinct types of retinitis:

- 1.—Discrete, white, punctuate areas occurring around the macula in both eyes, but more marked in one than in the other. (This is the only type found in patients who have sugar but no albumin in the urine and is the most common form.)

- 2.—Massive exudates and massive hemorrhages, occurring deep down in the structures of the retina and associated with vitreous opacities. (These patients have albumin as well as sugar in the urine.)

- 3.—Massive hemorrhages in the superficial layers of the retina and into the vitre-

\*Notes from an address by Dr. Harry Gradle, of Chicago, before the Medical Round Table, July 13, 1926.

ous. (These patients also always show albuminuria.)

Retinitis does not occur in *uncomplicated* diabetes. The vascular changes in this disease are mild and chronic. The blood-sugar is not a marked factor in retinitis and the eye symptoms show little response to diabetic treatment.

G. B. L.

#### CLICKING OF THE JAW (Replies to Dr. Tucker)

Referring to the article by Dr. Hyman Tucker, in *CLINICAL MEDICINE* for June, 1926, mentioning a case of clicking of the jaw, I have recently had such a case which developed after extraction of an upper wisdom tooth. It disappears at times, and always returns without warning. There is a loud clicking when the mouth is opened, as in chewing, attended with considerable pain.

X-ray examination shows what appears to be a small spicule of bone attempting to enter the joint from the front.

I have been able to give some relief by the use of mild, prolonged treatments of diathermy and massage with iodex-methylsalicylate, but have given no permanent relief.

The patient is a white woman, unmarried, 30 years of age. She is apparently healthy.

C. O. LAWRENCE,

Calera, Alabama.

In Vol. 33, No. 6, p. 419, of your valued journal, I find a query about "Clicking of the Jaw," and I send you a translation of a remedy published in *Therapeutique dentaire*, a leading dental journal of France.

"*Habitual Luxation of the Mandibula.*—Inject, under local anesthesia, 2 cc. of 90-percent alcohol into each of the masseter and temporalis muscles, and 1 cc. into the internal pterigoid, on both sides, of course. "Repeat the injections one week later."

WM. C. ACHARD,

Zürich, Switzerland.

#### INSURANCE EXAMINATIONS

After reading your article on "Life Insurance Examinations" in the August issue (p. 541), I wish to state my experience on the subject. I agree with the Medical Director you quote as to the time required to do good work. In fact, it takes an hour or more to make such examinations properly.

I find the majority of agents do not *wish* a careful examination made, and they send applicants to the examiner who makes a quick, unsatisfactory examination that passes the applicant. I have found this so often both in fraternal and other companies that I do not care to make examinations for that reason, much as I would like the extra money. At the present time I make a few examinations for the Life Extension Institute for the inadequate fee of \$2.50. Such an examination is well worth \$5.00, but, of course, in these the acceptance of the person is not in question as they are already insured.

I believe the real difficulty lies with the agent. He, of course, wishes to secure the policy to make his commission, and he prefers the examiner who passes the greatest number.

In regard to "Physicians and the Volstead Act," I asked the editor of *Medical Economics* how many of the physicians who opposed the present condition were total abstainers. He had not included that question in his questionnaire and, of course, that would affect their opposition. I believe all those answering in favor of the Volstead law were probably abstainers, as I am and as I answered.

JESSIE M. MCGAVIN,

Portland, Ore.

[Sooner or later the careless examiners will come up against a strict and vigilant medical director and then there will be grief in store for them.

It seems to us that the only answer to the problem is a solid front, presented by a united medical profession, demanding higher standards of work from insurance examiners and *adequate* pay for the type of work done. If we do not do this no one will do it for us.—ED.]

#### THE TREATMENT OF INCOMPLETE ABORTION

The ideal form of treatment of incomplete abortion is the one which assures that all placental tissue has been removed from the uterus with the least trauma possible. At the present time, three forms of treatment seemed to be favored, namely:

1.—The so-called conservative treatment, in which pituitrin in one-half cc. doses is used combined, if bleeding is excessive, with tight packing of the vagina.



2.—Instrumental dilatation of the cervix and digital exploration of the uterus.

3.—Instrumental dilation followed by instrumental curettage.

Different clinics have modified these methods slightly. Believing that when instrumental dilatation was used, the morbidity was unduly high, and the number of days spent in hospital too great, and that there was too much uncertainty in the conservative method as to whether the uterus was empty, the form of treatment now in use at the Montreal General Hospital was introduced by Dr. Little one year ago. It is really a modification of the second method described above.

If the cervix is dilated by means of Hegar's dilators to admit the index finger, considerable damage is inevitably done. As the lymphatics of the uterus run from the cervix toward the broad ligaments, any damage to the cervix favors the spread of an infection to the parametria. A physiologic dilatation is more nearly approached by packing the uterus and cervix tightly with gauze, thus stimulating uterine contractions. Again, if we depend on pituitrin and vaginal packing, in a goodly number of cases all the placenta will be removed with the pack, but a considerable number of patients will return in a few days or weeks after discharge complaining either of pain from spreading infection or hemorrhage due to a retained fragment.

The details of our treatment are as follows: If the cervix is open, easily admitting a finger, and there is free bleeding, the uterus is emptied under gas oxygen anesthesia, by means of the gloved finger. The right hand is introduced into the vagina and the index finger used to explore the uterus and separate the piece of placenta. The left hand placed on the abdomen grasps and steadies the uterus from above. When all the fragments are loosened from their attachment, the hand is withdrawn and, if necessary, the pieces removed with an ovum forceps. Undue manipulation is avoided.

On the other hand, if the cervix does not admit a finger, a 1-inch or 2-inch gauze pack, soaked in *acriflavine emulsion*, is pushed through the cervix into the uterus with an appendiceal packer without anesthetic. The fundus, cervix and vagina are all tightly packed. Twenty-four hours later, this packing is removed under anesthesia, and as the cervix is now open, the uterus is explored with the gloved finger. Some-

times on removing the pack, pieces of placenta are seen adherent to it. However, as we are unable to say whether the uterus is free of all products of conception, time is saved by exploration digitally. No douche, either vaginal or intrauterine, is given at any time. Forty-eight hours after returning from the operating room, the patient is allowed out of bed and is discharged the following day.

Contrasting the last twenty-five cases treated in the above manner, with the last twenty-five treated by instrumental dilatation and curettage, the former required 5.2 days hospitalization and showed an average maximum temperature rise to 99.2°F.; while the latter group were 9.2 days in the hospital and showed an average morbidity of 100.6°F. The latest report from the Women's Hospital, New York, where 80 percent of incomplete abortions are treated by instrumental dilatation and curettage and 20 percent by the conservative method, showed 11.6 days hospitalization for those treated radically, as against 11.8 for the conservative method (pituitrin). Dr. Gordon of Bellevue Hospital, New York, who advocates the conservative treatment, reports that the average stay in the hospital among 768 aseptic cases was six days.

Whilst we cannot hope to get any better results than these, still we do not feel that we can discharge the patient with absolute confidence that the abortion is complete, without any exploration whatever of the uterus.

E. PERCIVAL,

Montreal, Canada.

*From Canad. M. A. J.*

#### SIX REASONS WHY INSURANCE EXAMINATIONS PAY

1.—Insurance work pays, because it is almost invariably carried on on a cash basis.

2.—It pays because, if the physician takes an interest in the work and does it well, he becomes a better doctor.

3.—It pays because it makes a better physical diagnostician of the examiner.

4.—It pays because it gives the examiner an introduction to many in his community with whom he would not come in contact otherwise.

5.—It is clean, dignified work and of the sort that creates a good impression upon those examined.

6.—Given sufficient insurance work the examiner need never fear that he will starve

or go ragged, for it will allow him to live and live well and at the end of each year he will not have to charge off a lot of worthless accounts or have large, unpaid balances remaining upon his books.

GEORGE L. SERVOS,

Reno, Nev.

From *Medical Economics*.

### PORTABLE SITZ BATH

At the Baylor Hospital, Dallas, Texas, they have devised a very ingenious apparatus for the hydrotherapeutic treatment of inflammatory conditions of the prostate, rectum and pelvic organs in general.

The disadvantages of the ordinary sitz bath, in the treatment of these conditions, are that it is very difficult to keep the water sufficiently hot to produce the desired effects; and that the heat is applied to the whole middle portion of the body rather than directly to the affected parts.

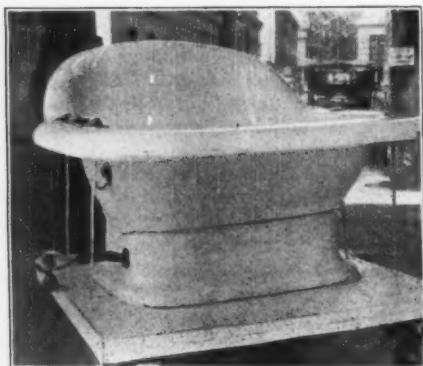


Fig. 1. Elevation of portable sitz bath, showing bolts holding tub to platform and electrical connections and switch, at the left.

In this apparatus, an ordinary sitz tub is bolted to a substantial wooden platform which is mounted on large and heavy casters. (See Fig. 1.) The central part of this platform is cut away and where the connection to the waste trap emerges a metal container is bolted to the bottom of the tub, with a water-tight joint. Into this container an electric immersion heating element is soldered, and from it a waste-pipe with a valve runs out to the side. (See Fig. 2.)

When it is desired to treat a prostatic, rectal or pelvic case by this method, the apparatus is moved to the patient's bedside or other convenient place, filled with



Fig. 2. Bottom view of portable sitz bath, showing casters, heating chamber and waste-pipe with discharge-valve.

warm water at a comfortable temperature to the desired depth and the patient placed in it. The electric heater is then connected to the nearest socket by a long cord and the current turned on. As the water in the container becomes heated, it rises through the hole in the center of the tub, and thus the heat is increased *gradually*, so that a considerably higher temperature can be tolerated, and is applied *directly* to the part where its effects are needed. The temperature of the water in the tub should be frequently checked with a bath thermometer and recorded.

When the bath is finished the patient's perineal region should be briefly douched with cold water. The tub is moved to the nearest accessible drain, the valve in the waste-pipe opened and the contents evacuated.

This apparatus should prove very useful in large and small institutions, and even as a piece of office equipment for those who are using hydiatic measures upon ambulant patients. It can readily be constructed by any competent mechanic having an elementary knowledge of electrical connections, and the cost would be moderate.

GEORGE B. LAKE,

Chicago, Illinois.

### THE MOTHER'S FOOD PROTECTS HER BABY

The mother stands between her baby and nutritional disaster. During pregnancy and the nursing period the material to build the baby comes either from the mother's food or from the stores she has accumulated in her own body. In case of food shortage the mother suffers first. If necessary she pays

for the health of her child with her own flesh and blood and teeth. A comment upon the inadequacy of the feeding of mothers in the past is the adage, "For every child a tooth." Fortunately, with the right food and dental supervision this need no longer be true.

A woman may live in fair health on a diet upon which she cannot properly nourish a baby either before or after birth. But even with a properly balanced diet her ability to supply the right sort of material for the baby's growth has a limit. Her power to do this successfully depends on—

1.—Her general health and state of nutrition before conception.

2.—The amount, kind, and adequacy of her food. If her food cannot supply the child's need her body must.

3.—The length of time she supports the growth of the child, both before and after birth. This is often at least eighteen months.

Inadequate feeding during pregnancy or the nursing period may lead to the physical depletion of the mother or prevent the normal growth of the baby.

DOROTHY REED MENDENHALL,

U. S. Children's Bureau.

### SMALLPOX AND VACCINATION

(Some Pertinent Questions and Answers)

In the July number of *CLINICAL MEDICINE*, I have just read a very interesting article, "A Personal Experience With Smallpox," and the editorial, closing with a query, "Are there others who will tell of their personal experiences with smallpox, and the value of vaccination?" That's easy if you will permit me to go back about fifty years, when I had enough experience to last me a lifetime. I have also had considerable experience as to vaccination among the Indians; but that is another story.

I certainly have had sufficient experience in handling cases of smallpox to entitle me to an opinion. I have been through at least one epidemic and the cases I had to handle were the simon-pure, genuine, unadulterated cases of smallpox, including the confluent variety. The faces of the victims of this form of the disease were so disfigured by the eruption and swelling that they were unrecognizable—all semblance to human features being lost.

I was City Physician at the time and had two districts under my care, one occupied by German residents, the other by Irish.

Smallpox is not a disease springing from unsanitary conditions, as could be noticed in the German district. Residences, tenements and surroundings were all clean; yet the smallpox followed the line of German occupation for some six miles, seldom even crossing the street into American quarters.

The explanation for the disease being confined almost exclusively to the Germans, when these people, in Europe, were universally vaccinated, forms a convincing argument in favor of vaccination. This epidemic occurred among the *unvaccinated* German-Americans who were born and raised in this country. In Germany, compulsory vaccination was the rule. In this country it was left to the parents to have their children vaccinated or not, as they pleased, with the result that these children were unvaccinated.

I had often from three to five cases in one room at the same time. There were hundreds of cases of the disease. I was among the sick daily, taking special notice of the eruption in the mouth and throat. For myself I had not the slightest fear of the disease, and I went through the epidemic unscathed. I was thoroughly protected by vaccination. Was it accidental that I did not see one person who was protected by vaccination develop a case of smallpox? A very few had a very few points of eruption, but not one of these was sick. Furthermore, this epidemic continued until at last the authorities got busy, rounded up the children in the school houses, with the aid of the police, and compelled submission to vaccination; and not until this was accomplished did the epidemic die out.

Further observation on my part was convincing that smallpox is not brought about by bad sanitary conditions. In the Irish district the conditions were the exact opposite from that which obtained in the German district. The entire Irish district was filthy. There was no cleanliness anywhere—even the people were careless of themselves. Some of the tenements were so unspeakably foul that I refused to enter them until some little improvement had been ordered by the Board of Health. Yet, there was not one case of smallpox among the entire Irish contingent. Observation developed that every man, woman and child showed the marks of vaccination. Was this freedom from smallpox accidental? Or was it a scientific demonstration of an established fact that

vaccination is certainly a protection; in fact a preventive?

At the time of this epidemic, I read an article in a medical journal, by a physician who remarked that, "vaccination is disgusting." I wondered if the writer ever saw a genuine, confluent case of smallpox. I assuredly know of nothing more disgusting. The odor is sickening; the appearance is frightful; all semblance to humanity is gone and the patient is shunned by all. And yet, vaccination which prevents all this is opposed by otherwise intelligent persons.

Now as to this opposition to vaccination. It seems strange that it exists in the light of scientific research of today and in the face of history. It looks like blind prejudice, operating against open-minded observation. Why were the Sandwich Islands, Porto Rico, the Philippines and other points scourged with smallpox until the United States obtained control and employed compulsory vaccination?

Certainly it seems to me that if anything in this world of ours has been proven beyond all cavil, it is that vaccination is a preventive of smallpox. Most assuredly my own experience would seem to be proof in support of it. How else can the absolute immunity of the vaccinated community be accounted for, as against the epidemic that raged among the community of the unvaccinated? And for miles, in the city, the line of demarcation seemed to be the middle of the street—the one class on one side, and the other class on the other. And why is it that after being indigenous in our present dependencies for a couple of hundred years without vaccination, it should suddenly practically disappear after the introduction of compulsory vaccination? If not accidental, there must be a reason.

J. L. NEAVE,

Dresden, Ohio.

[This is good stuff, well put! Let's have some more experiences like this. Other things, too! Every one of you has some definite and clean-cut ideas about methods of diagnosis and treatment, collecting accounts and other matters of practical, daily interest to all doctors. Open up and tell us about them and make everybody (yourself included) happier and more competent.—Ed.]

It is not the highest test of strength to lead aroused public sentiment, but the highest test is to oppose it, when it is wrong.—Dawes.

### COLLECT PROMPTLY

"The older they get the tougher they get" applies to physicians' bills as well as to hens.

Collect *promptly* all or part of your bill. Take a note for the balance and arrange for *regular*, weekly, or monthly payments to be made *on a certain day*.

If you do not handle your accounts in a business-like manner you will lose not only money but patients.

C. W. BUCHANAN,

In *Med. Economics*.

### MAKING OBEDIENCE EASY

If a habit of obedience is to be built up, first of all *study* your child. Know what he thinks and how he reacts.

Give few well-thought-out commands and see that they are fulfilled; a command worth giving is worth carrying out. Avoid over-correction and an autocratic manner; children are as quick to resent domination as adults.

Gain the child's attention, then make the directions clear and simple and, if possible, explain the reason for the request. The child who has learned by experience to expect only reasonable requests will be prepared to act in an emergency when immediate response may be a vital matter.

Gain the child's interest, show him the value of the desired action, be interested in his accomplishment and in the outcome.

Make requests positive instead of negative—"Do" rather than "Do not." Give a suggestion which will draw the child's interest away from the forbidden act and focus it on something else.

Consider promises carefully before making them. Once they are made keep them or explain the reason for failure to do so. Do not break trust.

Be consistent; have one set of rules. Do not allow at one time what is forbidden at another. In this way the child will know what to expect.

Be generous with praise and appreciation of effort. Too often children receive attention only when they disobey. Let them learn to obey because the request is reasonable and because compliance brings pleasure and approbation, rather than for material reward.

Above all things expect obedience. Don't let the child feel that you are uncertain as

to his response or that you are sure he will disobey. Everyone likes to live up to what is expected of him—particularly the child. He may as easily live up to your pride and confidence in him as to his reputation of being the most undisciplined little scamp in the neighborhood.

D. A. THOM,

Boston, Mass.

### PSORIASIS AND FOCAL INFECTION

Psoriasis is one of the most common skin diseases. Usually when first seen by the family physician, it may be recognized and diagnosed correctly, or mistaken for some similar skin disease. At any rate, the most that leading authorities on skin diseases can or have promised patients affected with psoriasis, in the past and at this time, is a possible clearing of the skin from the lesions. Recurrences will more than likely appear within a few months following any form or method of treatment. Even though the external lesions may all disappear, they will reappear in the fall, winter, or early spring months, following what may seem a cure.

Patients, when first they have had a diagnosis of psoriasis made, are thankful to have the lesions and symptoms relieved; however, after a time, they make most urgent requests for some form of treatment which will give them a "cure to stay cured," and when dermatologists advise them that a "cure to stay cured" is out of the question, most patients will not heed this honest advice, but will seek relief from anyone who may offer any form of treatment and a cure regardless of how impossible it may be, each failure seeming to urge them to try any treatment they may hear of.

Recognized dermatologists and leading authorities do not hesitate to advise patients affected with psoriasis that known or proved causes for the disease have not been determined, nor a "cure to stay cured" accepted or proved by authorities or advised in accepted textbooks on dermatology.

Recently attempts have been made to establish focal infections as a cause of psoriasis. Dr. Mackay, a Canadian dermatologist, has demonstrated to his satisfaction that foci of infection were the underlying cause of the disease in seven cases examined by him. The teeth and tonsils, Mackay believes, are the most frequent offenders, and with the removal of focal infection, followed by local application of chrysarobin ointment

and hypodermic injections of proteins, he successfully treated six patients with what he believes to be a cure, as there has been no return in any of the six cases during from two to four and more years. Previously these six patients had recurrences each year, year after year. The seventh patient treated did not complete the treatment and later had a recurrence. This stimulated him to have treatment again, which was completed as suggested by Mackay and resulted in a cure.

The history and symptomatology of psoriasis can be found in all textbooks of dermatology. [See, also, CLIN. MED. for May and June, 1926.—Ed.]

Focal infections other than those in the teeth and tonsils, such as chronic recurrent appendicitis, infected gall-bladders, ulcers of the cervix uteri, etc., have been known to cause boils, infected wounds, encephalitis lethargica, trachoma, pyelitis, acute otitis media, eczema, infections of the skin, carbuncles, iritis, iridocyclitis and hayfever, in addition to lichen planus, psoriasis and other skin diseases.

Personally, I firmly believe that psoriasis is, in many cases at least, caused by focal infections. Teeth and tonsils have been found to be the greatest offenders. I have found foci of infection in teeth and tonsils in every case of psoriasis that has been examined for such foci. One patient, a woman, had psoriasis for several years and had been advised to have a thorough examination for local infection. The dentist reported negative findings on the teeth. The tonsils were reported infected and were removed. Two years later the patient reported that she had not had an attack of the disease since the tonsillectomy; whereas, previously, she had one or more attacks each year.

The treatment indicated, after focal infections have been found and removed, is the local application of chrysarobin ointment, to assist and hasten the removal of local lesions, with hypodermic injections of a foreign protein. This latter will cause chills followed by fever up to 101°F. or over, to which some patients object; however, Mackay has found it possible, by these means, to cure seven cases, so that they had no return of symptoms for two or more years following treatment.

Another worker has used hypodermic injections of quinine, mercury and neoarsphenamine. The quinine, being painful when given subcutaneously, has been discarded and mercury or neoarsphenamine



are now being employed and found to produce a leucocytosis which, with local treatment, seems to really cure this refractory disease.

All patients seeking a cure for psoriasis should have their teeth and tonsils examined by specialists and other foci of infection looked for and, when found, removed. Local applications, with protein injections and mercury or neoarsphenamine, as selected, bid fair to produce results and are free from danger, if properly handled.

#### Summary

The cause of psoriasis has not been found, according to authorities on dermatology.

All cases of psoriasis usually have recurrences of lesions in the fall, winter, or spring months, year after year.

Patients, after having been treated for several years, seek some form of treatment that cures them permanently.

During the past year or two Mackay and other dermatologists have been encouraged by reports as to focal infections being a cause for psoriasis and by the results of treatment on this basis.

The removal of foci of infection will be beneficial to the patient, in any case and, as the subsequent treatment recommended is not dangerous, this method is worth trying.

ROBERT EMMET JAMESON,  
Davenport, Iowa.

#### THE PHOSPHATIC INDEX

Dr. Clemesha's article in the September number of *CLINICAL MEDICINE* has provoked a prompt response in the form of numerous requests for information regarding the phosphatic index and the phosphatometer.

The editorial office of a medical journal

is a busy place and the labor incident to answering these requests is a considerable burden, so, in order to side-track as many of them as possible, we are going to state that the large demand has entirely exhausted our supply of copies of the issue of *CLINICAL MEDICINE* for October, 1926.

We suggest to those who are interested that they write to Dr. J. Henry Dowd, 437 Franklin Street, Buffalo, N. Y. He can give full information about the phosphatometer and the phosphatic index. He may have some reprints of the article you want.

Dr. Clemesha's address is 55 North Pearl Street, Buffalo, N. Y., and he will, no doubt, be glad to give you information.

In writing to either of these gentlemen, please be so courteous and considerate as to enclose a stamped, addressed envelope for a reply, as they will, no doubt, receive many letters.

Ed.

#### HAY FEVER SUGGESTIONS

During the active stage of the hay fever, the following suggestions are not to be sneezed at:

- 1.—Stay at home and save expenses.
- 2.—Wear amber glasses. It aids in overcoming irritation of the eyes.
- 3.—Avoid dust and flowers.
- 4.—Keep windows finely screened during the day and night to avoid ingress of pollen. [Fine cheese-cloth will do.—Ed.]
- 5.—Drive in closed automobiles.
- 6.—Take little or no vigorous exercise.
- 7.—Be prepared for sudden changes in temperature.
- 8.—Be moderate, especially in eating.

HERMAN N. BUNDESEN,  
Chicago, Ill.



# The Leisure Hour

## More Monkey Business

THOSE who read the extraordinary article contributed to this department by "Ican Popemoff, M.D., Professor of Deep Sea Ornithology, etc., etc., in the University of Moscow," will, it is reasonable to assume, peruse the story of Nora, Voronoff's problematic protégé, with palpitating perturbation. Popemoff did some wonderful things with glands skillfully snoopied from the Walrus, but Voronoff has shown an absolutely uncanny originality.

But let the facts (as known) speak for themselves. *They* can, though, unfortunately, Nora, up to the present time, is dumb: for that matter Voronoff doesn't say much, but has adopted a "wait and see" attitude.

The eminent Professor, as even the "garden variety" of physician knows, is, to a very great extent, responsible for the gland transplantation fad and, though Popemoff and one or two investigative surgeons of Chicago claim to have performed the first successful *human* transplantation, Voronoff merely smiles at their claims and sarcastically murmurs "produce your evidence." Such evidence, sad to state, is not easily forthcoming a year after the "eminently successful" operations. Even some of Popemoff's great grafts petered out in a few months and the grafted went back into the sere and yellow from which they came. All that, however, sinks into nothingness when NORA (Voronoffed) takes the lime-light.

Nora, you must know, is a hand-picked female specimen of *Anthropopithecus niger*, the anthropoid ape of equatorial Africa. In other words, she is a female chimpanzee, possessed of an affectionate disposition, fairly intelligent in many ways, and indisposed to "roam nocturnally and fill the woods with loud reiterated cries, varied through every variety of horrid noise" as, Du Chillu states, is the custom of her kind. At this writing she is the only Voronoffed chimp. in the universe, and civilization breathlessly awaits developments.

To be Voronoffed means something to the ape and even more (perhaps) to civilized man. In order to properly appreciate this

fact we must consider thoughtfully each step of the Voronoff procedure and then ask ourselves again and again "What will the harvest be" and, if there is a harvest, what on earth are we going to do with it? And where, generally, do we get off? Several other questions will doubtless present themselves, but these are the most important.

Having secured his Nora and won her simian confidence, Voronoff first deprived her of her ovaries and gave her instead a pair deftly removed from a human female. No one knows how many operations of the kind were done upon other chimpanzees, but success crowned the surgeon's efforts in Nora's case and she "functioned perfectly" a few months thereafter. The first step had been attained. Now, it became necessary, in order to "Voronoff" Nora perfectly, to fertilize her. Having human ovaries, she could, it was believed, bear a human infant, so, with the aid of a glass and rubber syringe (and some obliging male), Voronoff succeeded in fecundating his Nora, and now it is announced that sometime in December or January we shall see—and presumably hear—the result.

In the meantime the utmost pains are being taken to secure for the expectant mother serenity of mind and perfect physical health. No reigning queen has perhaps received the attention that this unique chimpanzee is enjoying. She may be a monkey that has been "monkeyed with" considerably, but she is about (perhaps) to clear up what has hitherto been a dark and dubious situation. If Nora produces a chimp. she makes a monkey out of Voronoff: if she produces a human child she bids fair to make monkeys out of all of us! The evolutionists will rejoice with exceeding joy, and the fundamentalists will sit up and howl—even as the great apes do when distressed!

The question, of course, arises, can a being mothered by a monkey—even of the "Voronoffed" kind—and sired by a syringe be regarded as *human*? If a male, could such a one be considered a citizen, entitled to the franchise? If a female, could it legally marry—and what recourse would the

husband have if she presented him with a simian progeny—or even 'arf and 'arf? If a seemingly human child is secured, will the State be its parent or Voronoff? If it appears human and develops human intelligence, who is to deny it the right to live, love, and multiply? To allow it to live and in any way desex it, would, as present-day laws read, be a most heinous crime. It certainly appears that Voronoff has started something he will not live to see finished, for the crux of the situation cannot be reached till the second generation appears.

As "Nature abhors a vacuum," so also she hates a hybrid. Man has, to a limited degree, succeeded in crossing animals, but they cannot reproduce themselves. The ass may be an ass, but he has it all over the mule! Whether a monkey-born man (or woman) will be able to produce a true human remains to be seen. The third generation even might prove disappointing, to say the least.

Of course, some scientific gentlemen laugh uproariously at Voronoff and his experiment. Equally loud guffaws went up not so very long ago when the possible transplantation of ovaries was announced. The fact remains that it *has* been accomplished and, as the blood of the higher apes and human blood are, so to speak, "congenial," it is not at all unreasonable to believe that human ovaries properly transplanted into the ape would function. What we do not know is whether the human or simian characteristics would predominate in the ova. If the human, then an ovum fertilized by a human spermatozoon should produce a human infant. The maternal influence, of course, would have to be considered and, after birth, the offspring would have to be nourished by a human foster mother. Under all these circumstances one need not be profoundly surprised to see Voronoff's Nora complete the cycle and "confound the world."

After a period of calm reasoning, however, the thinkers of the world are apt to recover their equanimity. The fact that an ape should produce a human child is startling enough, but it would be a humanized ape—and humanized apes do not occur without Voronoffs. Even the *humanized* ape would (probably) not produce anything but imperfect apes if naturally mated with her own kind. The fact that Nora may produce a human offspring will, after all, prove nothing further than that the simian on whom human ovaries have been grafted, can, if the ovum produced by such ovaries be fecundated by human spermatozoa, af-

ford, through its life processes, the nourishment necessary to mature the fetus in utero and ultimately permit of its removal alive by Cesarean section.

If the ape survives, she is still an *ape*. If the offspring survives and assumes human attributes it is a *human*, prenatally nourished by an ape. Its real parents, of course, are the original owner of the ovaries and the donor of the fecundating spermatozoon. If such a child is born it will unquestionably present the characteristics of those individuals, modified possibly by the Simian carrier. If the offspring is simian-like, it proves that human generative tissue grafted into a simian body assumes simian characteristics so definitely that even fertilization thereof by a human fails to make an impression.

And *that*, it seems to me, is all of *that*. Nothing not already fairly well known will have been learned and certainly, whatever the outcome may be, we shall be no nearer settling the question of whether man was, or was not, originally an ape—or something like it.

Great apes have carried off native women and "what-is-its" have been the result. These are interesting monstrosities, of course, but their being reveals nothing particularly worth while. To breed back men to apes or to perfect apes into men would, of course, mean something, but Nora's progeny, conceived under entirely unnatural conditions, will be at best a freak—and freaks do not stand for much in the orderly scheme of things.

Unfortunately, if the experiment succeeds, the question will arise as to whether or no the creature possesses a *soul*—and that problem will naturally defy solution. Personally, I should be inclined to take the position that Nora, "the brute beast that perisheth," acted merely as an animated incubator and that all the human attributes are transmitted by the cells united and nourished in her warm recesses. Biologists may take exception to such reasoning—but what do all the biologists living *know* about the soul? Just as much as you or I do: we believe we humans possess it and assume that it enters its fleshly temple very, very early—but just *when* or just *how* no man knows. If the Divine essence or Soul is with man from "the beginning to everlasting," then it is reasonable at least to assume that it is transmitted from parents to offspring and so, despite the monkey medium, Nora's baby *would* have a soul.

No one, certainly, would deny a soul to the child born normally to the woman who supplied the ovaries Nora carried, even though she were impregnated artificially by a spermatozoon derived from the male utilized in this case! If, in such union of human cells, a separate soul takes up its existence, such beginning of soul life would occur in the uterus of Nora. It has never been claimed, I think, that the mother furnished the soul—though she has been accused of contributing nevi through “deep impressions” received during gestation!

Under all the circumstances it is evident that Nora's offspring, unless quite undeniably an ape, cannot be destroyed and studied anatomically. With human appearance, it must be regarded as a human being and treated accordingly. Forewarned of its coming it will behoove the government to take steps to safeguard the welfare of the new citizen and, this being done, when the said citizen reaches maturity, someone will have to determine whether it is best to isolate him or her or permit normal mating and reproduction. A false step here might be followed by the most disastrous results. Voronoff has started to raise a veritable Frankenstein monster and perhaps the best thing that could happen would be for Nora to die now.

Perhaps, too, it might be as well to positively interdict further experiments along this particular line. There are, unhappily, monkeys enough among us without adding to the variety. Curiosity is common, of course, to man and monkeys, the only difference being that man's is constructive as well as destructive; that of the monkey destructive only. It is not desirable to construct a questionable physical being at the expense of ideals, which, adhered to for generations, have made us less like simians than were our esteemed ancestors.

I am, of course, interested in Nora, but I sincerely hope she proves that men cannot “gather figs from thistles”—nor babies from baboons.

#### Police the Air Lanes

Of course, you have discovered that when you turn your dials these cool autumn evenings, things are not what or where you expected them to be. The esteemed “chain” is still with us and the programs furnished therefrom are beyond criticism, BUT half the time some “little fellow with a big voice” is camped so close to their wavelength that you cannot enjoy the output of either. We all of us unquestionably prefer

real music to the harmonica or jews-harp, but *real* music, hashed in transit, is distinctly inferior to harmonica renditions *unspoiled*.

It appears that a host of the minor stations objected very strongly to being piled twenty or thirty deep on one wavelength and, certain regulative laws failing to pass, demanded places in the sun. Some of those requests were officially granted, others were not, whereupon the rebuffed station promptly jumped any wavelength he deemed “vacant” and therefrom proceeded to make music or discord as he listed. One very powerful station in Illinois sat down on a wavelength and defied the powers that (are supposed to) be to budge him. They didn't, and, as a result, possessors of even the most selective and sensitive sets, in this vicinity at least, seldom or never hear two or three distant but very much appreciated broadcasts. When, under decent circumstances, one can enjoy programs from—let us say—KOA Denver, WSMB New Orleans, and KDKA Pittsburgh, it is rather exasperating to have to listen to a blanketing local. It is worse than that to find a station like WJAZ New York almost garroted between baking-powder and seed supply-house stations—especially when one of them runs “broad” most of the time. Now, we are told, Radio Corp. has secured WEAf—and the very condition I said a year ago was coming, has arrived. Unless, somehow, something is done soon to clear up the present mess the radio fan will fan himself out six nights of the week—or “let the kids tune in.”

Of course, we would be unappreciative indeed did we not recognize the wonderful service given by the big stations. BUT we would be stupid did we not also realize that said stations make very large sums of money by their ability to get the majority of set owners to tune in and hear good announcers, excellent music, and mitigated advertising of carpets, ginger ale, or tires. They want to give us the best, but in order to secure that, they must be sure that you've got to listen to what they present. It is, of course, a strange fact that these goliaths of the air do get wavelengths which are not cluttered up, but it would seem possible to let both these parent stations and their subsidiaries have the air for a well-understood limited period and then subside so that those who like to *travel* (and most of us do) can voyage peacefully.

One must, of course, realize that all sets are not constructed to get distance and the

owners of these sets are just as much entitled to hear things as the more fortunate possessors of superhets. The single powerful local may blot out many stations for some listeners and inevitably one or two for the perfectly equipped expert. In and around Chicago we have to contend with a dozen powerful stations and a full score of less potent but equally persistent broadcasters. Therefore, our lot is not always a happy one. Those of us who are thirty, forty, or fifty miles out are still more or less blanketed and compelled, six nights in the week, to take just what we can get—usually "local."

Throughout the long summer months, however, three or four outside stations have been available. First and foremost WJAZ New York—this may be (is) a "trust" station, but it is also a trusty one. Not more than half a dozen times have I failed to pick it up and enjoy its program. WSMB New Orleans has managed to reach the Middle West most of the time, and WPG Atlantic City has (when unblanketed) been delivered perfectly during July and August. During that period KOA Denver and KDKA Pittsburgh were hopeless. The West generally has been blank, and I have yet to meet anyone who has, save as an accident, been able to receive a Canadian. Soon we shall hear Winnipeg, Calgary, Edmonton, and Montreal again—but that time is not yet.

Taken altogether, the radio situation is satisfactory, yet exasperating. The air lanes are overburdened and traffic regulations entirely inefficient. A corp of air cops will have to be formed—men who will everlastingly listen in and have the authority to pull in to the curb broadcasters who are "broad"; pirates who sail the ether without license; and other malefactors too numerous to mention. Radio has reached the point, alas, where it will have to be regulated and then—as with all regulated things—it will lose a great deal of its appeal for a lot of us.

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"What makes your daughter so talkative?"

Old Gent: "I think she and her mother were both vaccinated with a phonograph needle."

—*Pharmaceutical Advance.*

## OPERATION FOR ECZEMA

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"Harry E. was taken to the hospital in the Schultz ambulance and was operated upon today for eczema on his ankle."

—From a Country Paper.

That is the only treatment I did not try on my eczema five years ago.

DR. J. H. A.

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Professor Brown (at the telephone): "What's that? You can't catch my name? Spell it? Certainly. B for Brontosaurus; R for Rhisophoracæ; O for Opisthotelæ; W for Willugbaya, and N for Nucifraga."

—*Pharmaceutical Advance.*

## INEVITABLE

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Woman Passenger: Oh, my! I'm so seasick I don't know what to do.

Captain: Don't worry. You'll do it.

—*Exchange.*

## POOR JOKES

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It's a poor joke—

When some woman blushes with embarrassment.

When some heart carries away an ache.

When something sacred is made to appear common.

When a man's weakness provides the cause for laughter.

When profanity is required to make it funny.

When a little child is brought to tears.

When everyone can't join in the laughter.

—*Exchange.*

## FROM THE DOCTOR'S PRACTICE

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Little Ann, age two years, was watching the young mother nurse her baby. At last she asked: "What is the baby doing?"

"She is taking her dinner, don't you want some?"

"No."

"Well, you used to get your dinner this way."

"I know I did, but my mother has no milk in her now. She's full of iced tea."—H. D. S., M.D., in *J. A. M. A.*



# Diagnostic Pointers

## CARCINOMA AND GUMMA

Syphilitic infection usually takes place before the age of thirty, whereas the late manifestations develop between that age and fifty. It may be difficult to distinguish between carcinoma and gumma of the liver, but neither jaundice nor ascites are met with as symptoms of gumma. If a middle-aged man has hemiplegia, it is probably due to syphilis of the cerebral arteries, because he has not reached an age at which cerebral hemorrhage usually occurs from advancing years.—SIR WILLIAM HALE-WHITE, of London.

## WASSERMANN REACTIONS IN CHILDREN

A baby's serum is frequently negative to the Wassermann test while he is 2 to 2½ months old; and the mother's serum is often negative until he is 5 or 6 weeks old.—DR. P. H. SYLVESTER, in *J. A. M. A.*

## THE EYEBALL IN DIABETES

It was formerly considered that any patient in coma whose eyeballs were so soft as to feel mushy must be a diabetic. This is still a very suggestive sign, but there are other conditions which may occasionally give rise to it.—DR. HARRY GRADLE, of Chicago.

## VERTIGO AND THE ENDOCRINES

Vertigo results from pathological conditions in the labyrinthine semicircular canals and involvement of the eighth cranial nerve. These disturbances may result from malfunction of the endocrine organs and such conditions were probably present in 66 percent of 1,100 patients studied. The effects are brought about by lowered vital function and lowered metabolism.—DR. DANA W. DRURY, in *J. A. M. A.*

## THE SURGEON AND THE SEVENTH NERVE

If neuritis of the seventh nerve develops an hour or more after a mastoid operation, it is not the surgeon's fault but is due to the progress of the disease. The prognosis for recovery, in such cases, is good; and the longer the time between the operation and the neuritis, the better is the prognosis.

Even a cut seventh nerve will, in some cases, regenerate slowly. If it fails to do so an anastomosis can be made with the *descendens noni* or the hypoglossal nerve.—DR. JOSEPH BECK, of Chicago.

## ECZEMA

Be sure to examine the urine of patients showing chronic eczematous lesions in the genital regions.—*Urol. & Cutan. Rev.*

## ASTHMA AND TUBERCULOSIS

It has been said that people who have tuberculosis do not develop asthma, while asthmatics never contract pulmonary tuberculosis. My own observations confirm this statement.—DR. G. J. WARNSHUIS, of Milton, Wis.

## THE BREASTS AND MENSTRUATION

Girls with very large breasts may have long periods of amenorrhea without pregnancy, or they may have very irregular or scanty menstruation.—DR. OSBORNE, Yale University.

## TEST OF BOWEL ACTIVITY

The fact that the bowels move daily does not prove that the canal is cleared. Give several tablets of charcoal after breakfast and have the patient report when the black color appears in the stool and how long it continues. This test often shows that intestinal action is much delayed.—SIR BRUCE BRUCE-PORTER, in the *Practitioner*.

## VALUE OF BASAL METABOLISM TESTS

The basal metabolic rate, when accurately determined by a reliable apparatus, is used primarily to identify thyroid disorders or to exclude the thyroid as a possible cause of disease, but it is also used, in the study of special cases, to observe the effect of procedures in diagnosis, therapy and surgery.—*Sanborn Technical Bulletin*.

## SALPINGITIS

One out of five women who have had an appendectomy have closed fallopian tubes. Induced abortions, intrauterine stems for contraception and intrauterine instrumentation for other reasons cause more salpingitis than does gonorrhea.—DR. R. L. DICKINSON, of New York.

**ACHILLES TENDON REFLEX**

The best way to test the Achilles tendon reflex is to have the patient, with feet and legs bare, kneel on the seat of a chair, facing the back and with the ankles over the front edge, heels up. A blow on the Achilles tendon will then bring out the reflex clearly—if it is present.

This is important, as it is the first reflex to be lost in *tuberc.*—DR. L. F. BARKER, of Baltimore.

**GASTRIC ULCER**

Peptic ulcer is rarely a primary gastric or duodenal fault, but is usually a secondary happening in the course of an acute systemic or chronic constitutional disturbance.—DR. FRANK SMITHIES, of Chicago.

**THE WASSERMANN TEST**

The Wassermann test is not specific in the diagnosis of syphilis but it is the best laboratory test we have and it is here to stay.

Results must be interpreted in the light of the clinical history and findings, which must be thoroughly and systematically studied.

Proper collection of specimens will eliminate many anticomplementary tests.

Consultations between clinicians and laboratory workers will clear up misunderstandings and discrepancies when these occur.—DR. SAMUEL HAYTHORN, of Pittsburgh, Pa.

**CAVITY IN THE LUNG BASE**

If there are no physical signs elsewhere in the lungs, a cavity of the lung, at the base, should never be diagnosed, for such a diagnosis is sure to be wrong.—SIR WILLIAM HALE-WHITE, of London.

**ACID PYURIA**

In an acid pyuria, be suspicious of a lesion higher than the bladder.—*Urol. & Cutan. Rev.*

**OSTEOMYELITIS**

There are two types of osteomyelitis; an acute variety, caused by the staphylococcus aureus, and a much milder form, due to staphylococcus albus or other organisms. The former should never be missed. The diagnosis is based upon: (1) sudden rise of temperature to 103° or 104°F., with or without a chill; (2) a feeling of malaise; (3) pain, just above or below a joint; (4) marked tenderness on firm, deep and pro-

longed pressure over the site of the pain.

—SIR HERBERT F. WATERHOUSE, in the *Practitioner*.

**DUODENAL ULCER AND PULMONARY TUBERCULOSIS**

Duodenal ulcer is found, at autopsy, in connection with pulmonary tuberculosis, of the chronic form, more frequently than with any other disease. The ulcer is generally not tuberculous and occurs between 25 and 35 years of age. Careful histories and x-ray examinations will probably reveal many cases of duodenal ulcer not now diagnosed.

—DR. I. R. LISA, in *Surg. Gynec. & Obst.*

**POSTOPERATIVE ADHESIONS**

A knuckle of small bowel adherent to the interior of the right abdominal wall, following appendectomy, frequently causes pain which is referred to the left side, thus confusing the diagnosis.—DR. JAMES T. CASE, Battle Creek, Mich.

**"MILD GONORRHEA" AND SYPHILIS**

When a patient gives a history of having had a very mild attack of gonorrhea which cleared up completely in a few days under simple treatment or none, always suspect that his trouble was not gonorrhea but *intraurethral chancre* and make a thorough examination for syphilis.—DR. GEORGE B. LAKE, Chicago.

**STERILIZABLE DIALYZING MEMBRANE**

The synthetic cellulose product known as "cellophane" and used largely for wrapping candy boxes and such things, is found to act perfectly as a dialyzing membrane for silver nitrate, sodium chloride and glucose, and also to withstand a pressure of fifteen pounds of steam, in an autoclave, for twenty minutes without alteration of its appearance of properties. This opens new fields in chemistry, physics, bacteriology and other lines of research.—DRS. KERR AND HILL, in *Vancouver M. A. Bul.*

**MARRIAGE OF COUSINS**

Where there is no taint of feeble-mindedness or physical deformity anywhere in the family, first cousins may marry and the dominant beneficial traits which each possesses will be emphasized in their offspring. On the other hand, when first cousins marry whose family history carries the taint of physical or mental abnormality, those ab-

normalities will be accentuated in their children.—Editorial in *Popular Health*.

#### REST AND SLEEP

There is little or no difference, in the effect on the heart, between sleepless rest and sleep. Uneasy sleep with exciting dreams results in an increased pulse rate with prolonged time of action.—DR. LEO KANNER, in *Am. J. M. Sc.*

#### SYMPTOMS OF TOXEMIA

If a pregnant woman, living and eating normally, voids less than 1000 cc. of urine in twenty-four hours she is potentially toxemic.

"Heartburn" and constipation are also suggestive of toxemia in pregnant women.—DR. KARL THORSGAARD, Chicago.

#### UNRESOLVED PNEUMONIA AND EMPYEMA

One of the commonest errors made is to believe that an unresolved pneumonia is present when, in reality, we have an empyema or an interlobar empyema to deal with.—DR. H. A. HARE, in *Therap. Gaz.*

#### BASAL METABOLISM TESTS

Experiments indicate that a stay in hospital of twelve to twenty-four hours preceding a basal metabolism test is unnecessary, as the figures obtained after the patient has made the exertion usually involved in getting to the laboratory under his own power, and has then rested in a recumbent position for thirty minutes before the test, show only minute variations

from the conditions following a period of hospitalization.—DRS. BENEDICT AND CROFTS, in *A. J. Physiology*.

#### PREECLAMPTIC SYMPTOMS

Albumin, casts or even red blood cells in the urine in the pregnant women, if no other symptoms are present, need cause no serious alarm; but if to these are added arterial hypertension, frontal headache, decreased urinary output and rapidly developing edema of the face and extremities, eclampsia is impending.—DR. ALFRED J. MITCHELL, Chicago.

#### EARLY TEST FOR PREGNANCY

Spray the nose with a 1:1000 solution of epinephrin; when the membrane is blanched, stroke the turbinate with a fairly stiff probe; if the line becomes still whiter the woman is pregnant, unless she suffers from migraine or epilepsy which produce the same symptom. In other conditions the line of the stroke becomes pinkish.—DR. FRANK NOVAK, Jr., Chicago.

#### SIGN OF PROBABLE PREGNANCY

Gauss published in 1920 a modification of Hegar's sign: The cervix presents in the early months of pregnancy an abnormal motility. It may be easily pushed to either side without entailing a corresponding movement of the uterus. He found the sign in 146 of 148 pregnancies (including one in the first and fifty-five in the second month). The two failures (both in the second month) were corrected ten days later. The phenomenon is comparatively rare outside of pregnancy.—J. A. M. A.



# Current Medical Literature

## THE PRESENT STATUS OF THE CONTROL OF SCARLET FEVER

Clock, in the *Annals of Clinical Medicine* for October, 1925, states that the benefit resulting from the injection of scarlet fever streptococcus antitoxin is so marked that the physician is justified in using the antitoxin in all but the very mild types of scarlet fever. The beneficial results consist not only in the prompt relief of toxic symptoms, but also in the lessening of the number of secondary complications. It is highly important to use the antitoxic serum early; for its effect in preventing secondary complications is most marked if used before the third day of the disease.

Blake has shown that the antitoxin must be used within the first seven days of the disease if beneficial results are to be expected; because normal antitoxin may be demonstrated to have replaced the toxin in the patient's blood from the ninth to the twelfth day of the disease. Hence, if the antitoxin is administered after the seventh day, its beneficial action is doubtful, because the patient is then deriving benefit from his own normal antitoxin.

For all except toxic cases, the antitoxin may be given intramuscularly in the gluteal region; but in toxic cases it should be administered intravenously. The dosage used by Black has been from 30 to 80 cc. in children and from 40 to 150 cc. in adults.

Obviously, the dosage of this antitoxin depends upon the severity of the disease. In the clinical trials thus far recorded with the scarlet fever streptococcus antitoxin the dosage in early cases of both moderate and severe scarlet fever has been a single intramuscular injection of 50 cc. of antitoxin having a potency such that each cubic centimeter will neutralize 5,000 skin-test doses of toxin. This has been followed by prompt and complete relief within twelve to twenty-four hours. In severely toxic cases, higher dosage (up to 150 to 200 cc.) should be used if the antitoxin is given intramuscularly; but 50 cc. is sufficient if given intravenously. If the antitoxin has a higher potency than capacity to neutralize 5,000 skin-test doses of toxin per cubic centimeter, a corresponding reduction in the volume of the dose may be made. For small children (under fifty pounds), one-half of the above dosage is probably adequate. At present a unit of antitoxin has not been established, but probably the amount that will neutralize 1,000 skin-test doses of toxin will be adopted as the unit in the near future. Then the dosage can be expressed in units rather than in cubic centimeters as at present.

The effects of the antitoxin are very striking. The rash begins to fade in six hours and the temperature drops; in twelve hours the temperature may reach normal. There

is a drop in the leucocyte count and in the pulse rate, and rapid subsidence of the angina. Toxic symptoms improve in twelve to fourteen hours after intramuscular injections of the antitoxin and within three to four hours following an intravenous injection. Children often sit up and play the next morning. In adults, also, the return of well-being is apparent within twenty-four hours.

Blake recently reported a series of ninety-three cases in which the antitoxic serum treatment was used. Of these, ninety-two were cured and one died. The fatal case was treated with antitoxin late in the disease. Only ten developed secondary complications. Hence there seems to be an indirect benefit from the antitoxin in septic complications.

In some patients, serum sickness follows the use of the scarlet fever streptococcus antitoxin just as it did in some patients when antidiphtheric serum was used in the treatment of diphtheria before refined and concentrated antitoxin was available. Such symptoms, however, are usually of short duration and require only local treatment with some bland evaporating lotion.

The prevention of scarlet fever after exposure is somewhat complicated. In case of definite exposure the Dick test is made as soon as possible, and at the same time a culture from the throat is made on blood-agar plates. If the Dick test is negative, nothing further is done; for the person is considered to be immune. On the other hand, if the Dick test is positive, the next procedure depends upon the throat culture. If the plates show no hemolytic streptococci, active immunization with scarlet fever toxin is carried out. In case the throat culture shows the presence of hemolytic streptococci, a prophylactic dose of 10 cc. of the scarlet fever streptococcus antitoxin is given subcutaneously, preferably in the interscapular region. In small children (under fifty pounds) a prophylactic dose of 5 cc. is probably sufficient.

The blanching test or *Schultz-Charlton phenomenon* has been made use of to differentiate the rash of scarlet fever from the eruptive characteristics of other infectious diseases such as confluent measles, typhoid fever, influenza, and the drug rashes. This test is carried out by injecting intradermally 0.1 to 0.2 cc. of antitoxin at a point where the eruption is most intense. After six to twelve hours, the rash—if it be due to scarlet fever—is definitely and completely blotted out in a zone of varying size surrounding the point of injection. The area is usually oval in shape with clearly defined edges, and within this zone the raised points of the eruption disappear and the skin becomes smooth. The blanched area persists throughout the disease and is protected from desquamation. In other

words, there is actually a local cure in the blanched area, due to neutralization of the toxin in the tissues by the antitoxin which is injected. The most favorable time for obtaining the blanching phenomenon in scarlet fever is during the eruption.

Scarlet fever streptococcus antitoxin unquestionably marks the greatest advance in preventive medicine during the last decade. Clinical trials conducted during the past year indicate that this new product is destined to prove as important and valuable a factor in the control of scarlet fever as is diphtheria antitoxin in diphtheria.

—*Therapeutic Gazette.*

#### HYOSCINE-MORPHINE ANALGESIA IN OBSTETRICS

Drs. O. H. Schwarz and O. S. Krebs have observed the effects of scopolamine (hyoscine)-morphine semianarcosis in 4000 deliveries at Barnes Hospital, St. Louis, and report the results of their observations in the *A. J. of Surg.* for October, 1925.

They believe that any ill results to the child following this procedure, in carefully controlled cases, are due to the use of an excess of morphine. They use only 1/6 grain of morphine with the first dose of 1/133 grain of hyoscine and repeat the dose of hyoscine alone in 45 minutes. Subsequent doses of 1/266 grain of hyoscine may be given as indicated by the condition of the patient and the progress of labor. The injections are given *subcutaneously* so that absorption may not be too rapid.

Its chief field is in primiparae and in multiparae with moderately contracted pelvises—cases where the first stage of labor is likely to be prolonged. In properly selected cases and given properly there is no appreciable danger to mother or child, labor is not noticeably prolonged, and 80 to 85 percent of the women who receive the treatment have no memory of their labor after it is over, though they may have been restless and sometimes noisy during its progress.

The only disadvantages of this treatment have to do with the attendants. Someone must be with the patient constantly; and the restlessness and excitability, while leaving no trace on the patient's recollection, may be trying to those who are taking care of her.

The authors are now treating their fourth thousand cases with hyoscine-morphine semianarcosis and present some interesting statistics. As the result of this extensive experience they have no sympathy with those who feel that this procedure is of doubtful value and unnecessary. On the contrary, they feel that such a method, which gives relief to mothers without danger to anyone concerned is highly beneficial.

#### RAYNAUD'S DISEASE

In the *Am. J. M. Sc.* for March, 1926, Dr. James J. Monahan, of Chicago, deplors the narrow limitations which are often placed upon the diagnosis of Raynaud's disease and reports several cases of undoubted Raynaud's syndrome which were more or less

atypical. One of these cases showed extensive involvement of the bones of both feet, necessitating amputation at the middle third of the right leg.

In summing up the results of his studies Dr. Monahan makes the following statements:

1.—Investigation of the basic cause of Raynaud's disease, and its cure, is hampered by the narrow limitations of the classical picture.

2.—The guide to diagnosis of Raynaud's disease should be the evidence of defect in the vasomotor mechanism rather than conformity of clinical manifestations to the phenomena as described by Raynaud.

3.—Thus, all gangrenes that can be accounted for by gross vascular obliterations, or other nonvasomotor causes, should be definitely excluded as "Raynaud's disease," even though they show the classic Raynaud phenomena; and all gangrenes that give evidence of being due to vasomotor disturbance should be included as "Raynaud's disease," whether they be moist or dry, symmetrical or asymmetrical, involve only superficial tissues or the deep structures as well.

4.—A chemico-physiological toxin is suggested as the cause of Raynaud's disease.

5.—The record of a case of Raynaud's disease showing extensive bone involvement is of interest for several reasons: (1) Because it showed so few of the classic Raynaud phenomena and yet was unquestionably Raynaud's disease; (2) because parts of the bony skeleton of the foot were sloughed out in a discharge which was found to be sterile; (3) because of the remarkable adaptation of form to function displayed by the crippled foot.

#### SPECIFIC TREATMENT OF HAY FEVER DURING THE ATTACK

The preseasonal desensitization of hay fever patients by the subcutaneous administration of pollen antigens of the pollens to which they are sensitive is now a well-recognized therapeutic procedure. The idea that such specific treatment can profitably be begun and carried on during the season when symptoms are at their height, while not especially new, is not so generally understood and accepted.

The technic of coseasonal treatment is quite different from the preseasonal or prophylactic treatment, in that the doses used are *much smaller* and are given daily instead of at three- to seven-day intervals.

In the *J. A. M. A.* for January 17, 1923, Dr. Warren T. Vaughan, of Richmond, Va., reported a number of cases in which the coseasonal treatment was followed by good results, even where the preseasonal treatment had failed. He used daily, subcutaneous injections of 0.25 cc. of a pollen extract containing 10 mgm. of protein nitrogen to each 100 cc. of solution. These injections were continued for periods of from five days to two weeks, according to the symptoms. When the patients were symptom-free the injections were given every second or third day; but if symptoms re-



turned, daily injections were again used. The dosage was *not* increased, but in one case the dose was doubled and given every other day. Small daily doses seemed better.

In the *J. A. M. A.* for January 16, 1926, Dr. E. W. Phillips, of Phoenix, Ariz., reports excellent results from the daily, intradermal injection of small doses of pollen antigen.

Dr. Phillips used the following technic:

"The sensitization was determined by the 'scratch test,' but a tiny incision was used, not a scratch. Then, by the same method, the patient was tested with the 1:500, the 1:5,000, and (if the latter was strongly positive) with the 1:10,000 dilution of the indicated pollen. Usually the 1:5,000 gave a weak positive reaction, and the initial dose of 0.05 cc. of the 1:5,000 dilution was given into the substance of the skin, the same as an intradermal test. The patient was instructed to note carefully the size of the resulting local reaction, comparing it to the palm of his hand. In the earlier cases, only three doses a week were given; in the later ones, treatment was given daily except Sunday. The patients were instructed to return on the next day (or the next treatment day), if the reaction had begun to recede by that time.

"The increase in dosage was adjusted to the tolerance of the individual patient, the attempt being to produce a local reaction about the size of the patient's palm, which reaction should begin to subside within twenty-four hours. With some patients the dose could be doubled at each treatment; others tolerated only a 50 percent increase, and occasionally a dose had to be repeated without increment. Care was taken to select a fresh site for each injection, in order to avoid desensitized areas and to insure a brisk local response to each dose.

"When relief was obtained, the dose interval was doubled, and the progressive increase of dosage was continued. Then, after three or four doses, the patient was directed to return at the first sign of hay-fever, and at ten-day intervals even if no symptoms had recurred. Some disregarded this last direction with no ill effect.

"Intradermal injections are painful if more than 0.25 cc. is introduced into one wheal. Accordingly, it was found necessary to add dilutions of 1:2500 and 1:250 to the armamentarium."

This treatment is reported to have been "monotonously successful." Every one of twenty-nine patients obtained complete or almost complete relief within periods varying from twenty-four hours to twelve days (this latter case received doses several days apart).

Dr. W. W. Duke, of Kansas City, has reported equally favorable results from this method.

Dr. Phillips feels that the results are proportionate to the severity of the local reactions rather than to the amount of pollen protein given. Daily injections are safe, provided the previous reaction has begun to subside and the rate of increase of dosage is well judged.

This method is recommended for trial by those who are experienced in hay-fever

work. Those who handle allergic cases but rarely had better stick to the accepted modes of treatment.

### SYPHILIS INFECTION FROM THE CADAVER

Hoffman, in the *Münchener medizinische Wochenschrift*, states that the spirochetes may live and multiply in the organs after death. Their movements—even in brains from paresis cases—persisted sometimes for days. Infection of a rabbit with three-day-old necropsy material proved successful.

Syphilitic infection acquired at necropsy is not only possible but has been proven beyond doubt in seven cases, and is probable in seven other cases. He queries why such cases are so rarely reported. One reason may be the tendency of the infected physician to keep it secret.—*Urol. & Cutan. Rev.*

### INSANITY

The ignorance of people in general regarding what is vaguely called "insanity" is immense, and this ignorance breeds neglect or concealment of cases of mental disease until they reach a stage where they are beyond help.

A recent *Bulletin* of the National Committee for Mental Hygiene lists some of the misconceptions regarding insanity that are still widely held:

That insanity comes suddenly.

That once insane always insane.

That insanity is a disgrace.

That insanity is an unfortunate visitation to be regarded with resignation and fatalism.

That mental disease is incurable.

That asylums for the insane are dreadful places and that admission rings down the curtain on the lives of the victims.

That emotional shock, the loss of dear ones, disappointment in love, economic loss and other misfortunes cause insanity.

That insanity is a specific disease entity.

That nobody can guard against mental disease.

That a person is either sane or insane.

That "nervous breakdown" is a disease of the nerves.

Against these should be set the teachings of modern science:

That insanity develops gradually over shorter or longer periods of time.

That insanity is a condition no more to be ashamed of than pneumonia or a broken limb.

That insanity is mental disease and should receive medical attention, just as tuberculosis, cancer or other physical conditions.

That many persons with mental disease are being cured today and restored to health and normality.

That our asylums are being turned into hospitals in which the insane receive medical care and treatment, and from which between 25 and 40 percent are discharged recovered or improved.

That personal misfortunes and tragedies are frequently the precipitating causes of insanity, but that the accumulation of a variety of factors inherent in the progressive life experience of the individual is really responsible for unsettling mental balance and bringing on mental breakdowns.

That "insanity" is a convenient term used by the courts to denote irresponsibility in the eyes of the law, and that there are many different kinds of mental disorder just as there are many kinds of physical disorder.

That there are usually danger signals and symptoms of an approaching breakdown that can be recognized and medically dealt with.

That "nervous breakdown" is in reality a mental condition in which there is seldom anything organically wrong with the nervous system.

A knowledge of these modern scientific teachings should be disseminated as widely as possible, in order to encourage those who are in the earlier stages of mental disorders to seek professional advice before their cases become hopeless.

#### ANTHRAX BACILLI IN HIDES AND ANIMAL HAIR

Dr. H. Migita, of the Laboratory of the Animal Quarantine Station, Osaka, Japan, reports in the *J. Jap. Soc. Vet. Sci.*, June, 1926, the number of instances in which anthrax bacilli were found in hides and hair imported from China for the years 1924 and 1925.

Of 335 cattle hides examined nineteen were infected.

Of seventy-six horse hides examined eleven were infected.

Of 158 samples of horse hair examined seventeen were infected.

Of 387 samples of bristles and twenty-six samples of goat hair examined, none revealed infection.

He says, "Since the year 1921, the importation of animal hairs to Japan, chiefly for the manufacture of brushes, became permissible after a course of disinfection at the Customs Houses at Osaka, Yokohama and Tsuruga, but there is no ideal method for disinfection of imported hides as yet."

—N. S. M.

#### MIXED STOCK VACCINES IN PNEUMONIA

In the *J. A. M. A.* for July 3, 1926, appeared a report of the paper read by Dr. Alexander Lambert, New York, before the Association of American Physicians at Atlantic City, on the use of mixed stock vaccine in pneumonia.

This report is based on the treatment of a carefully controlled series of cases at Bellevue Hospital during the four years, 1922-26. There were 221 cases of pneumonia of all types treated with the vaccines and, for purposes of comparison, 286 cases were treated with the usual supportive treatment but without the vaccines.

These control cases were sick simultaneously in the wards.

The vaccine used was a mixed stock vaccine sterilized without heat. It contained 200,000,000 influenza bacillus, 100,000,000 pneumococcus, 100,000,000 streptococcus, 200,000,000 micrococcus catarrhalis, and 200,000,000 each of staphylococcus aureus and albus to each cubic centimeter.

The usual dosage of this vaccine was 1.5 cc, intramuscularly every six hours so long as the temperature was above 99°F., and when the temperature fell to 99°, the dose was cut to every twelve hours for one or two doses and then to once in twenty-four hours during convalescence.

The type of patient included all ages from 13 to 80 years or over, as well as the acute alcoholics. Taking all factors into consideration the type of cases treated in Bellevue Hospital was the severest test which any treatment of pneumonia could undergo.

Digitalis and other symptomatic treatment was used, as indicated.

The results obtained with the vaccines as compared to the control treatment can be most readily seen in the following table which is compiled from the original paper:

	Vaccine Mortality	Control Mortality
All cases 1922-26.....	21.2%	40.5%
Cases treated within 48 hours of initial onset..	5.8%	42.0%
Cases treated within 72 hours of initial onset..	9.8%	37.0%
Cases treated after 72 hours.....	26.6%	42.3%
Type I Pneumonia.....	8.0%	17.0%
Type II Pneumonia.....	16.0%	72.0%
Type III Pneumonia.....	12.0%	35.0%
Type IV Pneumonia.....	17.0%	27.0%
Patients 50 years or over	33.3%	59.0%
Patients under 50 years..	16.4%	29.9%

It was observed in these cases that the temperature, pulse and respiration showed marked improvement during the first twenty-four hours after the first dose of the vaccine as compared to the control cases. This improvement in the control cases did not show until about the end of the fifth day.

The effect of the vaccine was to diminish the severity of the disease rather than to shorten its course.

Speaking of the advantage of vaccines over other recommended treatment, Dr. Lambert in conclusion says:

"The advantage of vaccines, compared with other specific treatments of pneumonia, has been that there is no protein reaction following their use, there is no terrific rise in temperature, and no dangers resulting therefrom.

"As compared with the serums so far used, there is no anaphylactic reaction with the vaccines, and the vaccines are not limited to any type of pneumococcus. They show a distinct lowering of the mortality in all types, compared with the mortality of the control cases of the same types.

"Mixed vaccines are obtainable anywhere in the country, and it would seem from these figures to be the most available specific treatment of pneumonia which has yet

shown a distinct reduction in the death rate of patients treated therewith.

"They have the advantages of being readily available by the profession, whether or not it may be possible to differentiate the type of pneumococcus; whether or not the patient can be treated in a hospital or at home. As long as the intramuscular injections can be given, these vaccines are available for use in pneumonia. They must, however, be used early in the disease, in sufficient amounts and sufficiently often in each twenty-four hours to be effective."

### VENTILATION

An editorial in the *Canad. M. A. J.* for May, 1926, recites the older ideas of the science of ventilation: That of Lavoisier, that "impure air" was dangerous because of its high content of carbon dioxide; and that of Pettenkofer, that the disastrous results were due to a hypothetical "crowd poison," exhaled from the bodies of the people in a room.

The modern idea is then well discussed; that good or bad ventilation depends upon temperature, humidity and the motion of the air. It is possible, by adjusting the humidity and air velocity, to make a man as comfortable at 90° as he would be at 70°.

Ideal conditions are obtained when:

- 1.—The air temperature is 66° to 68°F.
- 2.—Oscillatory or inconstant air currents are moving at 0.6 feet per second.
- 3.—The humidity is such that a wet-bulb thermometer stands at 56°F. (50 percent saturation).

Greenberg has shown that for rooms where less than 100 people are present the best system is to use open windows for supply, with gravity for exhaust and direct radiation for heating.

The ordinary methods in vogue for keeping the air of dwellings and meeting places moist in winter are wholly inadequate, and the only safe way to determine whether or not the humidity is sufficient is to test it with a hygrometer or wet-bulb thermometer, and then adopt or devise some means for keeping it at the proper level. If this is done it will result in heating economy, for one will be as comfortable in fairly moist air at 74° or less as he would be in dry air ten degrees warmer.

### HEMORRHOIDS

Dr. J. F. Montague feels that there are many erroneous ideas in the minds of many physicians regarding hemorrhoids, and in a brief article in the *M. J. & Rec.* for April 21, 1926, he mentions some of these, as follows:

1.—That hemorrhoids are hereditary. A distinction must be drawn between a hereditary weakness in vascular tissue and the inheritance of actual hemorrhoids.

2.—That extensive preoperative catharsis and enematization is a necessary preliminary to hemorrhoidectomy. Patients do much better with the very simplest kind of preparation.

3.—That it is necessary to "tie up" the bowels following a hemorrhoid operation. In the average case that has not been subjected to preoperative catharsis the patient will *not* have a bowel movement for two or three days even if tincture opii is omitted.

4.—That hemorrhoidectomy cannot be done as completely under local as under general anesthesia.

5.—That rectal wounds will always heal by first intention if they are sutured at the time of operation. As a rule, infection of the wound occurs, the sutures slough out, and we have a worse condition than would have existed had the wound been left open.

6.—That there is a capillary form of hemorrhoids. Pathologically, this condition consists in a teleangiectasis of the mucosal capillaries.

7.—That there is an arterial form of hemorrhoids. This condition is often the remains of a partially cured hemorrhoid in which the venules have been obliterated but the artery remains. The structure is really a polyp.

8.—That it is required by law that the first bowel movement shall be painful. There are simple measures which may be taken to make this event painless.

9.—That the injection treatment of hemorrhoids is invariably followed by sloughing. When this treatment is properly administered, no sloughing occurs.

10.—That the only cause of "piles" is constipation.

11.—That hemorrhoids occur in children under three years of age. Most of these cases are really prolapse and not hemorrhoids.

12.—That the general surgeon operates on hemorrhoids with the same care he would use on almost any other condition. Usually the junior interne, who is the most inexperienced man on the staff, has these cases assigned to him. If the general surgeon operates at all, in most instances he never personally treats his case again.

13.—That the average graduate in medicine ever had presented to him even an elementary study of the commonest of rectal diseases—hemorrhoids. In some grade A schools, the course in rectal diseases merely has a place in the curriculum—a final resting place. The course itself is never given.

Dr. Montague feels that any competent physician can operate successfully upon hemorrhoids, if he will give the matter sufficient study and attention, but that, at present, this annoying and painful condition is being largely neglected by the profession.

### INCONTINENCE OF URINE, AND ADENOIDS

In a recent lecture before the Medical Society of Bucharest, Dr. Munteanu said that little mention is made of the part played by adenoids in causing nocturia in children. Despite the pioneer work of Major and Baumgarten, it was not until Freyberger published a report of his eighty-six cases and Fischer reported his investigations that the relation between adenoids and nocturia was recognized. The urine in such

cases is passed in a stream, and only during sleep, or when the child is half awake. There seems to be a reflex irritation of the longitudinal muscle fibers of the bladder, the action of which is stronger because voluntary control of the sphincter is in abeyance during sleep. Etievant's theory is that the deficient oxidation of the blood in children, whether brought about by adenoids or by other nasal obstructions, produces anemia, headache, nightmare, and, by a reflex action, nocturnal incontinence. There is some clinical foundation for Etievant's idea. In some cases in which removal of the adenoids did not produce satisfactory results, the nasal respiratory tract was in part occluded by polyps. Removal of these was immediately followed by cessation of nocturia. The effect does not always follow quickly after the operation; in Etievant's cases fifteen days elapsed before the desired result was obtained.

—J. A. M. A.

#### THERAPEUTIC VALUE OF MUSIC

Charles M. Diserens, Ph.D., professor of psychology in the University of Cincinnati, is preparing a book on the effects of musical stimuli, and the *Merrell Digest* for June-July, 1926, contains a brief résumé of its main points.

Numerous authorities are cited to show that different kinds of music produce definite and various physiologic responses in different kinds of people.

While this subject has by no means reached a stage of scientific certainty, it possesses much interest, and the following points seem to be very generally agreed upon by a number of observers:

1. Music increases body metabolism.
2. It increases or decreases muscular energy.
3. It accelerates respiration and decreases its regularity.
4. It produces marked but variable effect on volume, pulse and blood pressure.
5. It lowers the threshold for sensory stimuli of different modes.
6. It thus affords the physiologic basis for the genesis of emotions according to the James-Lange theory, and consequently influences the internal secretions according to the researches of Cannon.
7. The precise influence of different modes and types of music has not been determined, and awaits adequate classification of musical selections, which must probably proceed at first by introspective and statistical methods.

#### BUYING SECURITIES

Many physicians lose money every year through the purchase of securities which are financially unsound. Many of these losses could be prevented if the doctors would investigate the offerings of the salesmen who solicit them.

In *Med. Economics* for August, 1926, Stephen LeBrun says that whenever anyone is buying securities he should ask the sales-

man ten questions. If the answers are evaded or evasive, drop the thing at once: If they are incomprehensible, because of lack of knowledge of such matters, our bankers will give us the "low down" on the matter.

#### The Ten Questions

(First—obtain an answer for each question.)

(Second—find out whether the answers are true.)

(Third—study the answers, or secure the opinion of your local banker.)

1.—What are the names and principal address of your employers and how long have they been in business?

2.—With what bank does your firm do business and what are its other references?

3.—What were the assets (real worth) of the company, in which stock is being sold, at the date of its organization, and what are its assets now?

4.—What are the company's liabilities?

5.—What are its earnings?

6.—How many times has interest or dividends on this security issue been earned in the past five years?

7.—Who are the officers of the company and what is their record of business activity in the past five years?

8.—What experience have these officers had in the business in which the company is engaged?

9.—Is this security accepted as collateral for loans at banks?

10.—What is the market for this security in the event that I want to dispose of it?

#### HYOSCINE IN POSTENCEPHALITIC PARKINSONISM

The value of hyoscine hydrobromide in relieving the symptoms of Parkinson's disease and of similar syndromes following encephalitis lethargica has been noted frequently.

In the *British Medical Journal* for May 1, 1926, Dr. P. K. McCowan, *et al.*, record attempts to show a scientific reason for this improvement and have demonstrated that it has a distinct relation to the carbohydrate metabolism.

They recommend beginning with small doses (1/150 grain), hypodermically, once a day, and slowly increasing to 1/50 grain a day. Doses of 1/100 to 1/50 grain may be given by mouth three times a day, *after meals*, for long periods, but the effect is not quite so satisfactory as when it is given by the subcutaneous route.

Their investigations lead them to the following conclusions:

1.—Hyoscine is of undoubted value in the Parkinsonism following encephalitis lethargica.

2.—This value is objectively demonstrated by its effect on the blood sugar curve, which is made to approximate to the normal type.

3.—This improvement is due to a specific action of the drug, though suggestion may be a subsidiary factor.

4.—This action of hyoscine is only temporary, but the prolonged use of the drug



does not lead to tolerance or any deleterious effects.

5.—The hysterical element in this disease is probably due to lesion of the basal ganglia, and it is suggested that an analogous lesion may account for similar symptoms in hysteria, chorea, etc.

6.—Though in the majority of cases the full benefit of hyoscine can only be obtained by hypodermic administration, there is no doubt that in many cases considerable benefit follows its oral exhibition.

#### A PLEA FOR LOCAL ANESTHESIA

An editorial in the *Am. J. of Surg.* for October, 1925, deprecates the limited use which is made of local and regional anesthesia in the routine office, home and dispensary practice of most physicians. This method is simple, free from danger and can be carried out by any reasonably well-qualified doctor of medicine, and there is no excuse for subjecting patients to pain in operations for hemorrhoids, ingrown toe nails and the like.

Elderly and debilitated patients and those who are poor surgical risks should not be exposed to the dangers of general anesthesia, especially with ether, when this safe and satisfactory procedure is available.

What are the medical schools and teaching hospitals going to do about the widespread ignorance and inexperience exhibited by practicing physicians in connection with these beneficent and life-saving methods for affording relief from pain in major and minor surgery?

#### REDUCING THE SURGICAL RISK IN INTESTINAL OBSTRUCTION

Drs. Thomas J. Orr and Russell M. Haden, of Kansas City, Kans., have found that there are chemical changes in the blood and urine in cases of intestinal obstruction, notably a decrease in the blood chlorides, an increase in the nonprotein nitrogen in the blood and urine and the development of an *alkalosis*; and that the extent of these changes is proportional to the degree of toxemia.

In the *Am. J. of Surg.* for October, 1925, they report that, on the basis of these findings, they believe that it is possible to cause a marked reduction in the operative risk in these cases by administering considerable quantities of sodium chloride before and after operation.

In very toxic cases they give, before operation, 1 Gram of sodium chloride per kilo of body weight (70 Gram for a man weighing 150 pounds), dissolved in two to four liters of water. This may be given intravenously or by hypodermoclysis in solutions of 0.8 to 3 percent strength. The stronger the solution the more slowly it should be given. It may be given by rectum, but this is not so good.

After operation the chloride treatment should be resumed, using the continuous intravenous drip of Matas if deemed advisable, and continuing as long as the patient has a dry tongue and thirst or until the blood chlorides return to normal.

#### "HYPOTENSINE"

Dr. C. Legiardi-Laura, of New York City, carried out some experiments to see whether the repeated and increasing administration of posterior pituitary substance would produce any effect upon the blood serum of treated animals and found that, after giving this substance to horses, the blood serum of these animals, when injected into men, produced a marked fall of the blood pressure, in cases suffering from hypertension.

In *Med. Insurance* for July, 1926, he reports that he has isolated from this serum a substance which does not give the biuret nor the Millon test for proteins and which produces the same results as the whole serum. The nature of this substance has not been ascertained, but it is not histamine nor the "B substance" of Abel. It may or may not prove to be a definite antipituitary substance. The doctor calls it "hypotensine," for the time being.

This substance, or the serum from which it is isolated, has been used by its discoverer in about 150 cases of hypertension and all but 5 percent of these have shown a fall of from 40 to 60 mm. of mercury, though in none has the pressure returned to normal.

Dr. G. Burtan has also used it in thirty-three patients at the Seaview Hospital, without making any change in their diet or way of living, and has noted the same results in every case, including the nephritics. None of these cases showed nitrogen or chloride concentrations above normal, nor did treatment with "hypotensine" cause any changes in these concentrations.

While this work is still in an experimental stage and the results rest upon an empirical basis, it seems to be of great and general interest.



# New Books

## HOLLENDER & COTTLE: PHYSIO- THERAPY IN EYE, EAR, NOSE AND THROAT

PHYSICAL THERAPY IN DISEASES OF THE EYE, EAR, NOSE AND THROAT. With Chapters on Some Borderline Affections. By Abraham R. Hollender, M.D., Attending Otolaryngologist, American Hospital of Chicago, Editor, *Archives of Physical Therapy, X-Ray, Radium*; and Maurice H. Cottle, M.D., Attending Otolaryngologist, Illinois Masonic Hospital at Chicago. New York: The Macmillan Company. 1926. Price \$5.00.

No one need apologize for publishing a book on physical therapy, for these methods of treatment are now recognized as wholly ethical.

For several years the authors of this work have been carrying out elaborate and careful laboratory experiments to determine the effects of the various electrical modalities on the structures of the head, and have been making numerous contributions to current literature. They have also done a large amount of clinical experimentation. Other workers, too, have been reporting results in this field in various medical journals.

In this volume the personal experiences of the authors and their friends and associates, as well as the gist of the conclusions of other investigators, are gathered together under one cover and make a very impressive array of clinical and experimental evidence.

The first part deals with the electro-physical agents which are to be considered and describes the mechanism and technic of the galvanic current, diathermy, sinusoidal currents, radiant heat-light, ultra-violet rays and x-rays.

There follow chapters on diseases of the eye; the ear; the nose and accessory sinuses; the mouth, pharynx and larynx; borderline diseases, such as hay fever and asthma; and an appendix setting forth the direct results of the authors' experimental studies. At the end of each section is an extensive bibliography of the subject for those who wish to go further into the matter.

The book is pleasingly free from padding and artificiality, as well as from the undue enthusiasm which frequently seizes upon our younger men when they take up a new and fascinating line of work which promises large results. The authors have stated their opinions, technic and conclusions clearly, simply and impartially, without apology for their certainties and without false ideas that there is nothing more to be learned. The whole spirit of the book is temperate and scientific. Empirical results are frankly so labeled.

The book is well gotten up and well printed from large, bright type on good

paper. The illustrations are numerous, timely and well-placed, and show the various types of apparatus used (including those designed by the authors), the technic of procedures advocated and photographs of cases treated. There are 307 pages of text and eighty-one illustrations. The index is satisfactory.

This volume is easy to read and should have a wide audience. All ophthalmologists and oto-rhino-laryngologists will find it highly interesting; the men who are specializing in physical therapy will want to know what it is all about; and general practitioners who possess electrotherapeutic apparatus will find that it opens to them a new and highly profitable field of activity and usefulness.

## BLANTON: NORMAL PHYSICAL SIGNS

A MANUAL OF NORMAL PHYSICAL SIGNS. By Wyndham B. Blanton, B.A., M.A., M.D. St. Louis: The C. V. Mosby Co. 1926. Price \$2.50.

Unless a physician knows what physical signs to expect in normal persons, his chances for discovering departures from the normal are slim.

This book is a skeleton outline of normal physical signs to be elicited by inspection, palpation, percussion, auscultation and by anthropometric measurements—in other words, by what is understood as a complete physical examination. Laboratory findings are not considered.

While intended for use by teachers as a basis for class or clinical instruction, there is no reason why individual students and practitioners should not find it serviceable for their personal studies.

## SULLIVAN: OUR TIMES

OUR TIMES; THE UNITED STATES 1900-1925; I. THE TURN OF THE CENTURY. By Mark Sullivan. New York and London: Charles Scribner's Sons. 1926. Price \$5.00.

This is the first of a series of books, by a celebrated observer of men and things, dealing with the times in which we have all been living. As such it has a peculiar and personal interest.

Mr. Sullivan has been in close touch with most of the history which has been made in the last twenty-five or thirty years, so that he is able to speak with great certitude and authority.

This volume considers conditions in all lines of activity as they were during the two or three years before and following 1900. The political situations involving Roosevelt and Bryan are given in spicy detail, including the peculiar conditions under which Roosevelt was elected Vice President when he did not want the office.

There are many intimate and little-known details of the inner workings of the Spanish-American War, which throw much light upon the subsequent political activities of many who were engaged, in one way or another, with that conflict.

It is difficult, sometimes, to realize that, twenty-five years ago, the automobile was a joke; airplanes, movies and the radio unknown; such words as "vamp," "flapper," "feminism," "bolshhevik," "cafeteria," "complexes," "sundae," "propaganda," and others which we use every day were not in the dictionary; potatoes were 35 cents a bushel, turkey dinners 20 cents, gingham 5 cents a yard, the best shoes \$2.50 the pair, and \$10 to \$15 a week was a good salary for a competent stenographer.

The work of Reed, Finlay and Gorgas in cleaning up Panama and thus making the Canal possible is dealt with at considerable length.

The style, throughout, is the picturesque and pungent production of the trained newspaper writer, with a keen sense of the dramatic and a faculty for digging up and presenting vital facts in an interesting manner.

The illustrations are delightful. Political and other cartoons of those days are reproduced; fashion plates of 1900 now seem wholly ridiculous; early photographs of men now prominent in the Nation's life will arouse a smile.

Everywhere the conditions of twenty-five years ago are compared with those of today so as to make the contrasts more sharp and impressive and the progress more clear.

This book is more fascinating than any novel, with the added attraction of essential fidelity to facts and the certainty that the reader, when he lays it down, will not only have been vastly entertained but will be a better-informed citizen than he was before.

The book is well-made, printed from large, bright type on good paper and fully indexed.

We heartily recommend this volume to all physicians for vacation or other reading. It will provide relaxation, absorbing interest, many hearty laughs and a solid and valuable addition to one's general knowledge.

#### LAIRD: INCREASING PERSONAL EFFICIENCY

**INCREASING PERSONAL EFFICIENCY.** The Psychology of Personal Progress. By Donald A. Laird, Ph.D., Associate Professor of Psychology, Colgate University; Secretary, Central New York Division of the Psychological Corporation; Editor of Industrial Psychology. New York and London: Harper & Brothers. 1925. Price \$3.00.

"Efficiency" has so long been a word to conjure with that it has come to be abused and almost trite; and many of the books on the subject which have appeared have been poorly written and useless. It is, therefore, refreshing to encounter this book by Dr. Laird. His suggestions for increasing per-

sonal efficiency are well presented, and following them can scarcely fail to increase the quality of one's work, as well as the speed with which it is accomplished. The book is well worth a careful perusal.

—E. H. V.

#### KRAUSE: REST AND OTHER THINGS

**REST AND OTHER THINGS.** A Little Book of Plain Talks on Tuberculosis Problems. By Allen K. Krause, A.M., M.D. Baltimore: Williams and Wilkins Company. 1923. Price \$1.50.

This book is intended for those afflicted with tuberculosis and for tuberculosis workers, physicians, nurses, public health and social workers.

The author explains tuberculosis and its causes, so far as is needed by the layman or patient, in simple language.

Throughout, the book carries an encouraging note to the tuberculous patient and those who are interested in his welfare, and it contains many valuable suggestions for the guidance of patients with this disease.

F. J. H.

#### KRAUSE: ENVIRONMENT AND RESISTANCE IN TUBERCULOSIS

**ENVIRONMENT AND RESISTANCE IN TUBERCULOSIS.** A presentation of the nature of environment and resistance and their relation to the pathology, diagnosis, symptoms, and treatment of tuberculosis. By Allen K. Krause, A.M., M.D. Baltimore: Williams & Wilkins Company. 1923. Price \$1.50.

This book compares in size with "Rest and Other Things" by the same author. It contains 137 pages and is made up of two parts: Environment, and Resistance (as related to tuberculosis). The section on environment would be of interest to the tuberculous patient and those concerned with his welfare. The second part would be of more interest to physicians and medical students.

This is another of the volumes intended to give the tuberculous patient an intelligent understanding of his malady, so that he may cooperate effectively in its treatment.

F. J. H.

#### ROGERS-LEADBEATER: DREAMS

**DREAMS AND PREMONITIONS.** By L. W. Rogers. Chicago, 2006 North Sayre Avenue: Theo Book Co. 1923. Price \$1.25.

**DREAMS: WHAT THEY ARE AND HOW THEY ARE CAUSED.** By C. W. Leadbeater. Hollywood and Los Angeles: Theosophical Publishing House. 1918. Price \$0.60. (Both from Theosophical Press, 826 Oakdale Avenue, Chicago.)

We have had the consideration of dreams from at least two standpoints: the old "dream books," which were popular among adolescents and credulous persons when we

were boys (and may still be found in some bucolic neighborhoods), based almost if not entirely upon superstition; and the more recent interpretation of these phenomena by the psychoanalysts.

Here we have two little books which present the subject from a wholly different angle—that of the occult student. Both are based upon the hypothesis that man is, essentially, a spiritual being (*manas*—"The Thinker"), who lives in and uses, not one body but three—the physical, for performing actions; the emotional or astral body, for experiencing desires and emotions; and the mental body, for thinking thoughts—and that he may have experiences on either of the higher planes of consciousness, some of which are occasionally brought over into the waking cognition of the physical brain.

Rogers' book is the more elaborate and detailed. He begins by discussing the dreamer himself and then proceeds to show, in a clear and logical manner, how and why the purely materialistic explanation of dreams fails to explain. He then takes up the various types of dreams and premonitions and considers them rather fully, offering an explanation which, whether it be true or not, is reasonable and interesting.

Leadbeater's book, while much briefer, covers much the same ground in an orderly and systematic manner.

Both books are written by able thinkers and writers, who appear to know whereof they speak, and present their material in a sane and attractive manner.

Both books should prove of decided interest to all physicians, and to many laymen, as well.

#### ROCKEFELLER FOUNDATION: MEDICAL EDUCATION

**METHODS AND PROBLEMS OF MEDICAL EDUCATION.** (Fourth Series.) The Record Room, Unit History System, and Follow-Up System of The Presbyterian Hospital in the City of New York. 61 Broadway, New York: The Rockefeller Foundation, Division of Medical Education. 1926. Sent gratis on request.

Embodying examples of all the various history sheets and other records in use in this famous hospital. Should prove of great interest and value to hospital executives and to all who are concerned with complete and elaborate record keeping.

#### PHYSIOTHERAPY LECTURES

**LECTURES, CLINICS AND DISCUSSIONS ON ELECTRO-PHYSIOTHERAPY.** Held at the Drake Hotel, Chicago, October 12 to 16, 1925. Under the Auspices of H. G. Fischer & Co., Inc. Price \$9.00.

This volume contains the addresses, lectures, discussions and reports of the clinics which made up the program of the fourth annual Physiotherapeutic Convention which was held in Chicago in October, 1925, under the auspices of H. G. Fischer and Company.

All these contributions were made by men who are actually doing the work, and what-

ever they lack in style (the manuscript of the book was not very carefully edited) is made up in direct statement and practicality.

The book contains 750 pages, printed from clear type on a good grade of soft paper. There are a number of illustrations, most of which show modern types of apparatus. It is the text, not the pictures, that counts.

Any physician who is using physical methods in his practice can get many practical points for his daily work from this volume.

#### RELATION BETWEEN TUBERCULOSIS AND MYOPIA

Dr. Georg Hirsch, Berlin-Schoeneberg, in *Zeitschrift für Tuberkulose*, Vol. 44, No. 1.)

Hirsch published a monograph a few years since in which he maintained that myopia is a tuberculous disease. This radical view, which is in opposition to all theories on myopia, has few determined adherents.

Hirsch tries to prove his contention statistically. If myopia be a tuberculous disease of the eye, its frequency must be in direct relation to that of tuberculosis; that is to say, if the curve of tuberculosis rises, that of myopia must rise also. The myopia curve must follow that of tuberculosis so far as the time element is concerned, for myopia consists in an elongation of the eye ball, which develops only gradually as the tuberculous toxin affects the posterior half of the ball.

Hirsch utilizes a tuberculosis curve for Russia and a myopia curve for Sweden, obtained from a study of all senior classes of the middle schools from 1895 to 1914, which curves show great similarities. Hirsch in conclusion asserts that myopia is developed through the effect of tuberculous toxins on the vasomotors in the area of the posterior half of the ocular bulb. Myopia can be prevented by tuberculin treatment of the children.

G. M. B.

#### DE TARNOWSKY: EMERGENCY SURGERY

**EMERGENCY SURGERY.** The Military Surgery of the World War Adapted to Civil Life. By George De Tarnowsky, M.D., F.A.C.S., D.S.M., Professor of Clinical Surgery, Loyola University Medical School, Philadelphia: Lea & Febiger. 1926. Price \$7.50.

At last we have a book which represents a distinct advance in surgical literature! We deem this book of great importance to scientifically-inclined surgeons and to all who practice industrial surgery.

De Tarnowsky, who stands high as a surgeon and a scholar, has an enviable war record for which the American Government accorded him the distinguished service medal. He aided the medical department of the Army through his familiarity with foreign and American military surgery and

his manuals did their share towards helping win the war.

Returned to civil life, the author decided that the lessons of the World War could be applied to the accidents and emergencies of peace time. There have been a few articles published on this theme, but they were neither exhaustive nor did they betray a scientific sifting and classification of the many problems involved. De Tarnowsky has done this in a large volume, and at once betrays a master mind which with iron logic carries through his scheme of adaptation of military surgical methods to civil life in the practice of traumatic surgery. This is wholly reasonable, because war is a traumatic epidemic and civil life a traumatic endemic.

De Tarnowsky gives us a very valuable work which will prove the last word in industrial surgery. He has not only the extensive theoretic knowledge presumed to be possessed by real teachers, but he is a practical clinician with abundant common sense at the bedside, to say nothing of his experience gained in the operating room by conscientious work performed in the most painstaking manner.

The entire field of traumatic surgery has been fully covered and nothing seems to have been forgotten or omitted. We are furnished valuable hints to overcome the difficulties connected with the diagnosis of lesions of the central nervous system. We are shown what is no longer modern in the management of accidents and injuries and what is proper and effective. Not only this, in itself a work requiring much thought and energy, but the author also furnishes industrial surgeons with valuable information concerning the medico-legal aspects of this class of injuries. Many an industrial surgeon who recalls the unpleasant moments of being cross examined by opposing counsel, will find much in this book as a valuable counselor to support him when testifying as an expert or as a witness of fact.

Would that De Tarnowsky had devoted a section to the physiotherapeutic methods in traumatic surgery. The war has amply shown their value. Maybe we shall have another monograph on this subject from his masterly pen. From a purely surgical standpoint, however, De Tarnowsky's book stands out in bold relief as a piece of American surgical literature of which we all can be proud. Surely of this book, if of any, it can be said, that no surgeon can afford to be without it.

G. M. B.

#### GRONDAL: FRIENDS IN HEAVEN

THE MUSIC OF THE SPHERES. A Nature Lover's Astronomy. By Florence Armstrong Grondal. New York: The Macmillan Company. 1926. Price \$5.00.

Few of us will ever be astronomers, in any technical sense, but no one who has occasion to be out much at night—especially to sleep out—has failed to be intrigued by the splendid pageant of the stars and constellations which slowly moves across the heavens during the hours of darkness.

When one has learned to know the celestial inhabitants by name and has become familiar with their habits so as to be aware of where they will be found at certain hours and seasons, the night can never again be lonely.

In this splendidly gotten-up volume the author has set out to give the reader an introduction to the romantic personages in the sky—not to teach higher mathematics—and with each introduction she throws in a brief biography of the person or thing presented, so that when one finishes reading he feels at home in this brilliant company.

Star maps for various seasons of the year are given so that no difficulty should be experienced in finding the things described.

For leisure-hour reading by the physician, especially if he reads with the younger members of his family, few books can be found more fascinating and instructive than this one.

#### INTERNATIONAL MEDICAL ANNUAL

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioner's Index. Carey F. Coombs, M.D., F.R.C.P. (Medicine), and A. Sendle Short, M.D., B.S., B.Sc., F.R.C.S. (Surgery), Associate Editors. Forty-Fourth Year. 1926. New York: William Wood and Company. 1926. Price \$6.00.

The volume of the International Medical Annual for 1926 is now available. It is a dictionary of practical medicine, wherein the most important contributions of the year are arranged in alphabetical order.

The bookmaking is good. The binding is substantial and dignified and the paper excellent. The illustrations are numerous and of high quality and include many full-page plates, several of which are in colors. The type is somewhat small, in order to economize space, but it is clear.

This is an almost indispensable reference book for the library of all physicians, especially those who lack time and opportunity to follow the current medical literature closely.

#### SCIENCE IN THE HOME

A SERIES OF ELEVEN RADIO TALKS ON SCIENCE IN THE HOME. Radio Publication No. 23. By W. A. Hamer, M.A., Asst. Director, Mellon Institute of Industrial Research, of the University of Pittsburgh, et al. Pittsburgh: University of Pittsburgh. 1926. Price \$0.75.

In March, 1924, the University of Pittsburgh established an educational radio studio and the present volume contains a number of the talks which were broadcast during the early months of 1926.

The subjects discussed are: Food Values; Cereal Foods; Foods from the Sea; Selection and Care of Beds and Bedding; Fuel Economy in the Home; Selection and Care of Textile Fabrics; Renovation of Wearing Apparel; Home Disinfectants and Insecticides; Care of Tablewear and Kitchen Utensils; Selection and Care of Flooring



**Materials; and Selection of Roofing Materials.**

The articles are brief and are couched in simple language so as to be understood by anyone. The book contains eighty-three pages and is bound in strong paper. Anyone who has a home ought to be interested, especially the women-folk.

**PRATT: MATTER AND SPIRIT**

**MATTER AND SPIRIT.** A Study of Mind and Body in Their Relation to the Spiritual Life. By James Bissett Pratt, Ph.D., Professor of Philosophy in Williams College. New York: The Macmillan Company. 1926. Price \$1.75.

Here is a book for the devotees of that most fascinating of all sports, the tracking of a shy and elusive idea to its lair.

The question of the relation between matter and spirit—between the human body and the soul that lives in it—has probably given rise to more philosophical discussion than any other in the realm of human thought.

Dr. Pratt considers the ideas of all the schools of philosophy, from Plato and Aristotle down to Santayana and Strong. He sorts and classifies their concepts and disposes of one after another by the time-honored process of *reductio ad absurdum* until the only one left is the philosophy of *dualism*—the idea that the soul and the body are beings of different kinds and cannot be studied or explained in terms of each other.

Nor does the author believe that such a discussion is academic and valueless. He declares, categorically, that our metaphysics is fundamental for life and the most potent determiner of character and conduct.

To two classes of people this book is *not* recommended: those who are already certain that the body is a different kind of thing from the soul which informs it; and those who are bored or terrified by the idea of sinking their intellectual teeth into a tough and knotty problem and hanging on until they have sucked all the juice out of it.

People who are not yet convinced that the body and the soul are *two* will here find valuable instruction. Those who love a complicated, but keen and logical discussion for its own sake will find much joyous intellectual excitement.

**SHERMAN: FOOD AND NUTRITION**

**CHEMISTRY OF FOOD AND NUTRITION.** By Henry C. Sherman, Ph.D., Sc.D., Mitchell Professor of Chemistry, Columbia University. Third Edition. Rewritten and Enlarged. New York: The Macmillan Company. 1926. Price \$3.25.

This book presents the principles of the chemistry of food and nutrition as related to man. It differs from other books by Sherman in that it relates to man's food from a nutritional standpoint, whereas the others give more detailed description of in-

dividual articles of food and the chemistry and legal control of the food industry.

Much original source material has been omitted in order to keep down the size of the book. A comprehensive bibliography at the end of each chapter, however, adds to its value as a textbook for college classes.

In the appendix are included tables giving the composition of a number of our foods and a list of food sources of vitamins A, B, and C.

The author has found this third edition necessary in order to include important matter disclosed by recent research. New chapters have been added and the references to source materials have been extended.

An excellent book for dietitians, health authorities, social workers and for physicians interested in the laboratory end of the problem of food and feeding.

F. J. H.

**HARROWER: ENDOCRINES AND BLOOD PRESSURE**

**THE ENDOCRINES AND BLOOD PRESSURE.** By Henry R. Harrower, M.D. Glendale, Cal.: The Harrower Laboratory, Inc. 1926. Complimentary.

This convenient little vest-pocket volume contains a large amount of information about blood pressure, its variations and their management.

There are chapters on Normal Blood Pressure, the Pressor Mechanism, the Sphygmomanometer, Low Blood Pressure, Organic Hypertension, Hyperpiesis, Organotherapy in High Blood Pressure, and a number of other interesting allied subjects.

This is a good little manual of blood pressure and will be welcomed by almost any physician as a valuable addition to his library.

**ALUM IN BAKING POWDER**

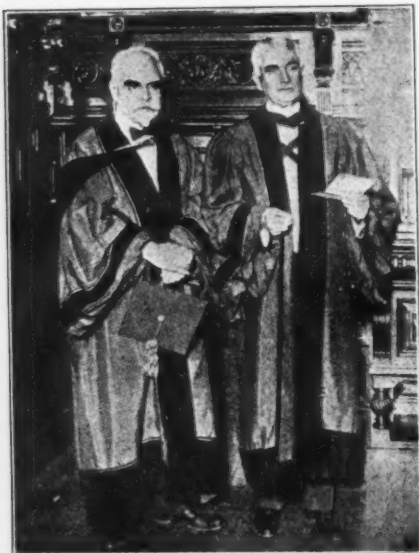
**TRIAL EXAMINER'S REPORT UPON THE FACTS INCLUDING REVIEW OF SCIENTIFIC TESTIMONY CONCERNING ALUM IN BAKING POWDER AND ITS PHYSIOLOGICAL EFFECTS.** As submitted by Edward M. Averill to the Federal Trade Commission, Washington, D. C., in the matter of Royal Baking Powder Company, Docket No. 540, on November 12, 1925. With Explanatory Foreword and Indices by Royal Baking Powder Company. New York: Royal Baking Powder Company. 1926. Sent free.

**CUSHING: INTRACRANIAL PHYSIOLOGY & SURGERY**

**STUDIES IN INTRACRANIAL PHYSIOLOGY & SURGERY.** The Third Circulation, The Hypophysis, The Gliomas. By Harvey Cushing, M. D. The Cameron Prize Lectures, Delivered at the University of Edinburgh, October 19, 20, 22, 1926. London: Humphrey Milford, Oxford University Press. 1926. Price \$3.25.



# Medical News



## NOTED SURGEONS DEDICATE MURPHY MEMORIAL

Dr. Rudolph Matas, of New Orleans, La., president of the American College of Surgeons, and Dr. W. J. Mayo, noted Rochester, Minn., surgeon, at the dedication, June 10, of the John B. Murphy Memorial Hall at Chicago, dedicated to the memory of Dr. John B. Murphy, who is considered to have been one of the greatest surgeons of all times. At the dedication ceremonies the memorial was formally presented to the American College of Surgeons as the new home of surgical science in the western hemisphere.—*Medical Economics*.

## SWINDLING PHYSICIANS

A man calling himself George William Fox or William Fox, and sometimes representing himself to be a physician, has victimized over fifty doctors in various parts of the country.

He comes into the office and describes himself as a college mate of his victim or of one of the victim's friends. After some conversation he says that he has been touring in the East with his family and finds

himself in need of cash and unknown at the bank and asks the doctor to cash a check for \$25 or \$50 for him. *These checks are worthless.*

Fox is about 42 years old, about 5 feet 10 inches tall and weighs about 140 pounds. He has a conspicuous scar under the left side of the jaw bone. If he calls on you, notify the police, as he is wanted in Chicago.

## UROLOGIC CLINIC IN CHICAGO

A urologic clinic, somewhat on the lines of the Brady Clinic in Baltimore, has recently been opened in Chicago and is called the Lydston Urologic Clinic, in memory of Dr. G. Frank Lydston. This clinic is intended to cooperate with physicians and furnish a high-grade service in the diagnosis and treatment of urologic diseases.



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## AMERICAN HOSPITAL ASSOCIATION

The American Hospital Association held its twenty-eighth annual session at Atlantic City, N. J., beginning September 27, 1926.

When the association was founded, in 1899, it consisted of eight hospital super-

intendents; the convention attendance is now about 5,000.

The president of the association is Dr. Arthur C. Bachmeyer, of Cincinnati, Ohio (shown above), who has been prominent in hospital administration affairs for a number of years.



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#### SPAIN SENDS LEADING CHEMISTS HERE

Dr. Jose Geral Pereira, of Madrid, president of the Spanish Association of Chemists, noted research worker and author of many scientific books.

Four leading chemists of Spain came to America to take part in the Golden Jubilee sessions of the American Chemical Society, in Philadelphia, the week of September 6. They also went to Washington, D. C., for the convention of the International Union of Pure and Applied Chemistry, the first world gathering of its kind to be held in this country.

#### AMERICAN PUBLIC HEALTH ASSOCIATION ANNUAL MEETING, BUFFALO, N. Y.

The fifty-fifth annual meeting of the American Public Health Association will be held in Buffalo, N. Y., October 11-14, 1926, with the Hotel Statler as headquar-

ters. The program excellently reflects the present-day problems in the public health field.

The regular annual conference of New York State Health Officers and Public Health Nurses will be held in conjunction with the American Public Health Association meeting, and this group will present a separate program on October 12.

The proximity of Niagara Falls with its many features of general and scientific interest will make the entertainment features of this annual meeting unusually attractive and an exceptional opportunity will be given to delegates to the meeting to visit places of scientific interest in Buffalo and Niagara Falls.

Members of the Association and their families will receive a 25 percent reduction in railroad fare traveling to and from the meeting. Non-members may make application for reduced fare to Mr. Homer N. Calver, Executive Secretary, American Public Health Association, 370 Seventh Avenue, New York City. The Secretary will also gladly furnish additional information regarding the meeting and the program.

#### AMERICAN COLLEGE OF PHYSICAL THERAPY

The American College of Physical Therapy will hold its fifth annual meeting at the Drake Hotel, Chicago, October 20 to 22, 1926. This will be preceded and followed by Clinics and classes on the 18th, 19th and 23rd. This will be the most elaborate physical therapy meeting ever held anywhere. For full particulars address Dr. A. R. Hollender, 30 North Michigan Avenue, Chicago, Ill.

#### CIVIL SERVICE EXAMINATIONS

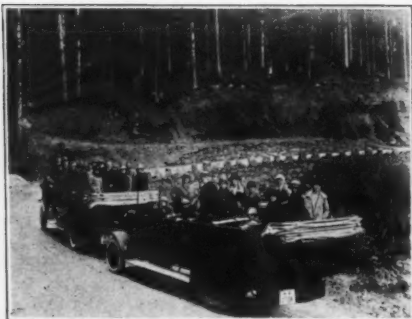
Applications for positions as *Physiotherapy Aide*, *Pupil Aide* and *Assistant* will be received up to October 9 and November 27, 1926.

Salaries range from \$720 a year, with food, quarters, and laundry, to \$2,040 a year without allowances.

Applications for positions as *Medical Artist* will be received up to October 12, 1926. Salary \$2,100 a year.

Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of U. S. Civil

Service Examiners at the post office or customhouse in any city.



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#### AMERICAN PHYSICIANS TRAVELING THROUGH THE BLACK FOREST OF GERMANY

Under the direction and guidance of Dr. Richard Kovacs, of New York, the Travel Study Club of American Physicians has been touring Germany. The picture shows the party of physicians, on their way through the Black Forest, near Baden-Baden.

Trips like this should do much to foster a friendly spirit between American and European physicians, and such an excursion cannot fail to broaden the professional and human outlook of all who take part in it.



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#### A NOTED STATISTICIAN

Dr. Elizabeth C. Tandy has been appointed Director of the Statistical Division of the Children's Bureau of the U. S. De-

partment of Labor and will have charge of the compilation of the mass of statistical information concerning the children of the United States. Dr. Tandy is a native of Indiana and was educated at Wells College, N. Y., University of Chicago, Columbia, and Johns Hopkins. She also took special work in medicine at Cornell and the University of Wisconsin.



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#### WHY IS A HUMAN BEING?

Dr. C. Judson Herrick, professor of neurology in the University of Chicago, has spent a lifetime in studying the structure and functions of the brains of the lower animals and of man and is convinced that there has been a positive, biological development of brain structure from the very lowest order of animals, through the fishes, amphibians, reptiles, birds and mammals up to man.

The result of his studies will be set forth in his book, "The Brains of Rats and Men," which will shortly be issued by the University of Chicago Press.

Professor Herrick says that the fact that a man can recite the lines of Henley's "Invictus"—and be telling the truth—is the thing which distinguishes him from the lower animals.

# Send for This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

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|---|--|
| HH-22 Biological Products for Human Use. With Indications for Use, Dosage, Price List, etc. Gilliland Laboratories.                                       | HH-91 The Colden Way. 8-page booklet by Century National Chemical Co.  |
| HH-29 Oral Health, and the Relation of Diseases of the Teeth and Gums (Pyorrhea) to Diseases of the Body. 24-page booklet. The Dentinol & Pyorrhocide Co. | HH-93 A New Hypnotic for the Treatment of Serious Insomnia. 4-page folder by Ciba Co.  |
| HH-30 Helping the Cell to Help Itself. 32-page booklet by The Alkalol Co.   | HH-172 Phyllosan in Anemia, Chlorosis and Wasting Diseases. 4-page booklet. Merck & Co.  |
| HH-31 The Romance of Digitalis—The Story of Its Discovery. 12-page booklet by Hoffmann-La Roche Chem. Co.   | HH-198 Pluto Water. Its Medicinal Values. 16-page booklet. French Lick Springs Hotel Co.   |
| HH-55 Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co.  | HH-222 Rabies Vaccine. 24-page booklet. Parke, Davis & Co.   |
| HH-65 Intestinal Infections of Children. 14-page booklet by Battle & Co.  | HH-231 Instant Relief for Cold in the Head and Sore Throat, Hay Fever and Summer Colds. 4-page folder. Schoonmaker Laboratories. |
| HH-69 Gonosan. 4-page folder by Riedel & Co.  | HH-238 Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co.   |
| HH-72 Direct Medication by the Intravenous Method. 16-page booklet by Intravenous Products Co. of America.  | HH-309 The Journal of Organotherapy. 95-page booklet published monthly. G. W. Carnrick Company.                                  |
| HH-73 How to Use Pan-Secretin Co. with Most Success in Diabetes. 10-page booklet by Harrower Laboratory.  | HH-311 The Cure of Cystitis, Pyelitis and other Inflammatory Conditions of the Urinary Tract. Chicago Pharmacal Co.              |
| HH-75 Intestinal Rectal and Anal Pathology. Booklet by Nujol Laboratories.  | HH-380 Nativell's Crystallized Digitaline. 8-page booklet. E. Fougera & Co.  |
| HH-81 Auto-Intoxication. 20-page booklet by Burnham Soluble Iodine Co.  | HH-403 Medinal. 4-page folder. Schering & Glatz, Inc.  |
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|   | HH-677 The Ideal Tampon. C. B. Moyer & Co.   |

- HH-680 Agar of No Consequence in Emulsions of Liquid Petrolatum. Standard Oil Co.
- HH-682 A Selected List of Special Formulas, 16-page booklet. Maltbie Chemical Co.
- HH-685 Theocalcin—A Diuretic and Vascular Remedy. E. Bilhuber, Inc.
- HH-687 How Yeast Vitamines Help the Physician. Carroll Dunham Smith Pharmacal Co.
- HH-689 A Few Notes Regarding Psychoanalysis. 32-page booklet. Fellows Med. Mfg. Co.
- HH-691 Mineral Waters Therapeutically Considered. 24-page booklet. Hiram Ricker & Co.
- HH-693 What Do the Phagocytes Mean to Your Patients? Carroll Dunham Smith Pharmacal Co.
- HH-700 "The Pot of Gold at the End of the Rainbow." Reed & Carnrick.
- HH-703 The Oft Unrecognized Importance of Acid Intoxication. 8-page booklet. Vass Chemical Co.
- HH-706 The Prevention of Fecal Retardation. William R. Warner & Co., Inc.
- HH-708 Leading S. & G. Products. 16-page booklet. Schering & Glatz, Inc.
- HH-710 The Quartz Lamp, Sept. 15, 1926. Hanovia Chem. & Mfg. Co.
- HH-761 Dental Disclosing Solution. Wm. S. Merrell Company.
- HH-762 Campho-Phenique Ointment. Campho-Phenique Company.
- HH-763 Sodium Ricinoleate in Dandruff. Wm. S. Merrell Company.
- HH-764 Treatment of Foot Strain Following Fracture of the Lower Leg, by S. L. Osborne, B.P.E. Victor X-Ray Corporation.
- HH-765 Victor Roentgen Apparatus. 8-page booklet. Victor X-Ray Corporation.
- HH-766 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company.
- HH-767 Mercury—Vapor Quartz High Frequency Electrodes. McIntosh Electrical Corporation.
- HH-768 Pyorrhea, a Simplified Treatment. Wm. S. Merrell Company.
- HH-769 Some Newer Developments in the Non-Operative Treatment of Cancer, by Edward H. Ochsner, B.S., M.D., F.A.C.S., Chicago Kahlenberg Laboratory.
- HH-770 Use of Milk in Diseases of the Stomach. Wm. S. Merrell Company.
- HH-771 Papillary-Adeno Carcinoma of the Ovary; Report of Case Effectively Treated with Colloidal Gold by Louis H. Nowack, M.D. Kahlenberg Lab.
- HH-772 Fischer's Magazine, September, 1926. H. G. Fischer & Co., Inc.
- HH-773 The Child in Medicine. 24-page booklet. Battle & Co.
- HH-774 Detoxol Liquid. Wm. S. Merrell Company.
- HH-775 Intravenous Treatment of Hay Fever. New York Intravenous Laboratory.
- HH-776 Loeser's Intravenous Solution of Sodium Thiosulphate. New York Intravenous Laboratory.
- HH-777 The International Medical and Surgical Survey. H. G. Fischer & Co., Inc.
- HH-778 Physiotherapy in the Medical Department of the United States Navy, by Erik G. Hakansson, M.D. H. G. Fischer & Co., Inc.
- HH-779 The Dangers of Curettage. Huston Bros. Company.
- HH-780 Optotypes, by John Green, M.D., LL.D., and A. E. Ewing, A.M., M.D. C. V. Mosby Company.
- HH-781 Hang This Up—It Tells How to Make Percentage Solutions. Sharp & Dohme.
- HH-782 Further Studies in Hay Fever and Asthma with Special Reference to Quartz Ray Therapy. Abraham R. Hollender, M.D., and Maurice H. Cottle, M.D. Hanovia Chem. & Mfg. Co.
- HH-783 An Attempt to Classify Indications for the Use of Ultraviolet Energy in Medicine. Leo. C. Donnelly, M.D. Hanovia Chem. & Mfg. Co.
- HH-784 The Vicious Circle and Its Efficient Treatment. Vass Chem. Co.
- HH-785 Health You Admire. How Thousands Have Conquered Their Ills. The Fleischmann Co.
- HH-786 The Direct Specific Stimulant to the Respiratory Center. Ernst Bischoff Co., Inc.
- HH-787 Medical Pocket Quarterly. September, 1926. Reed & Carnrick.
- HH-788 Applicators and Accessories for Victor Quartz Lamps. Victor X-Ray Corp.
- HH-789 Thirty Years' Experience in the Field of Radiography. Victor X-Ray Corp.



